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THE NATIONAL ASSOCIATION OF SECONDARY-SCHOOL PRINCIPALS

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PART I

Mobilizing Education for the War

Introduction

The secondary schools in America are mobilizing their full resources and entering a conversion program to train and prepare all youth for war-time service in the armed forces or in the essential civilian occupations. It is a task for education without parallel in the nation's history.

A promising beginning of gearing peace-time teaching standards into an all-out war-time program for all youth has been made by many of our 28,000 secondary schools and more effective conversion programs are becoming operative in these secondary schools this year. These schools will provide the nation in the crucial period ahead with a trained and basically prepared youth as the secondary manpower reserve.

Today administrators, teachers, and pupils are determined to transform the great and potentially powerful Army of Education of more than 8,000,000 persons into an alert and maximally trained force for victory. It is the largest of all armies for victory and in it are the specialists that will be needed tomorrow—the mechanics, machine gunners, radio operators, sanitary technicians, nurses, motorcycle drivers, engineers, typists, and many others. It is not a question of unity of aim or determination, but how it can be done in every individual school. There are many problems of organization, of supply, and of operation to convert a peace-loving institution into one that will effectively serve with full energy the war effort today and tomorrow.

During the past year and summer months many national committees and commissions have been at work and the results of their efforts are now available for secondary-school administrators. Digests of the most important of these are here presented. Many of these were initiated through the United States Office of Education War-time Commission and its committees. On August 28-31, 1942 a National Institute of Education and War was held under the sponsorship of the U. S. Office of Education Wartime Commission, when authoritative Federal officials stated to the organized educational authorities the needs and issues for education in wartime. Some of the significant addresses are here recorded for the guidance of educators.

The second section of THE BULLETIN is a report of war-time activities in our schools during the past year. It is believed that with a careful study of both these sections and with the resourcefulness and ingenuity of teachers combined with that unflinching determination to meet crucial issues, every school will have an effectual war-time program.

Military Needs for Trained Manpower*

LIEUTENANT GENERAL BREHON B. SOMERVELL
Commanding General, Services of Supply, War Department, Washington, D. C.

We are engaged in total war.

That is why we are meeting here today. For total war reaches into every phase of a nation's life. Total war is waged not only on the battlefield, in the factory, and in the home. It is waged in every classroom throughout the nation. Every classroom is a citadel. Every teacher has his part to play.

The job of the armed forces is to win this total war on the battlefield. The job of industry is to furnish the weapons and supplies needed by the armed forces to carry on total war. The job of the schools in this total war is to educate the nation's manpower for war and for the peace that follows.

I shall repeat. The job of the schools in this total war is to educate the nation's manpower for war and for the peace that follows.

We can lose this total war on the battlefield as a direct result of losing it on the industrial front, on the home front, or on the educational front. Education is the backbone of an army. This was never more true than it is today—now.

Our army today is an army of specialists. Out of every one hundred men inducted into the service, sixty-three are assigned to duties requiring specialized training. We aren't getting those sixty-three specialists through the induction centers. But modern mechanized warfare dictates that we must have them. Yes, we must have these specialists—these men who know the fundamentals of electricity, who know automotive mechanics, who can operate radios, or dismount carburetors. Without them, your army would be an incongruous mass, incapable of attaining any objective.

THE ARMY NEEDS SPECIALISTS

How badly do we need them? How big is the deficit? Here are some figures. Listen to these, ladies and gentlemen. For herein is the crux of your army's need for trained manpower. On January 1, 1942, out of every 1,000 men inducted, your army needed fifteen who had some kind of training as radio operators. From February 1, 1942, through March 31, 1942, we were getting less than one man per 1,000. We were short then almost fifteen men per 1,000 inducted. Think of that! Actually out of every 300,000 men inducted, we needed 4,689 with training as radio operators. We were getting 135. We were short 4,554.

Out of every 300,000 men inducted, your army needed 4,501 with training as medical technicians. We were getting 166, a shortage of 4,335. We needed 4,372 telephone and telegraph linemen. We were getting 343, a short-

*Address before the National Institute on Education and the War, sponsored by the U. S. Office of Education War-time Commission, August 28-31, 1942, in Washington, D. C.

age of 4,029. We needed 1,562 master mechanics. We were getting fourteen, a shortage of 1,548.

In the entire field of automotive mechanics, which includes many allied subjects, out of every 300,000 men inducted, we were short 10,437. That means a shortage of 34,790 out of every 1,000,000 men. In an army of 4,000,000 men, that's a shortage of 139,160 automotive mechanics.

Taking only those specialties in which the army has found major shortages, we find a total of 62,853 lacking in every 300,000 men inducted. That adds up to 838,040 in an army of 4,000,000 men. Yes, these shortages of trained manpower—of men trained in the fundamentals of jobs that must be done in a modern army—are serious, much too serious. The situation is not getting better. It is fast getting worse. The specialist field is being combed and recombined. The supply of trained men is dwindling by the day. Add to this the shocking fact that more than 200,000 men in this nation already have been deferred from induction into the armed forces because of educational deficiencies—because of illiteracy. These 200,000 men might constitute fifteen combat divisions, yet they must be taught to read and write before they can be utilized by your army.

THE ARMY'S EFFORTS TO REMOVE THESE SHORTAGES

What has your army done to meet and to overcome this situation? It was a simple matter when your army was small. When we needed specialists, we trained them in army schools, with army instructors. There was no premium on instructors. Facilities were ample. But when we started to expand your army through the Selective Service, we had to expand these facilities. And with the expansion and the adaptation of your army to modern mechanized warfare, the need for men with basic specialized training increased. We increased our training facilities. We enlarged our staffs of instructors.

After Pearl Harbor, with the army rapidly increasing in size, army facilities were not enough. We contracted for and secured facilities outside the army, still using army instructors. But this was not enough. The need for basic specialists continued to increase. We went further outside the army. We inducted men who had no basic specialist training but who through aptitude tests showed that they could be developed into specialists. We sent them to civilian schools where they were taught by civilian instructors. They returned to the army ready to apply their knowledge to its combat counterpart.

But I tell you that even this is not enough. It's not enough because your army is expanding at a rapid rate. It's not enough because we no longer can create new facilities for training of a noncombatant nature. It's not enough because despite all we've done, shortages of basically trained men whom we must have are mounting day by day. And it's not enough because we're in a hurry today as never before in our nation's history. We're in a hurry to

put into the field a fighting force capable of overcoming those who seek to destroy everything for which America stands; who seek to destroy America herself. Our job is to teach men to fight. We cannot lose sight of this. We cannot long continue to take the time and facilities needed for this job and use them on a job which could have been done before the induction of men into the army.

THE SCHOOL'S PART IN THE PROGRAM

This is your job in this total war. It is the job of the schools and colleges of America to provide the opportunity for every youth to equip himself for a place in winning the war. You must do this, regardless of cost, time, inconvenience, the temporary sidetracking of non-war objectives, or even the temporary scrapping of peacetime courses. The schools and colleges of America must become pre-induction training centers for our armed forces, leaving the armed forces free to train men in the combat application of the training that you give.

We cannot win this war unless we mobilize the entire nation. We cannot win this war unless every man, woman and child alters his way of living and finds new ways to put his talent and abilities, his body and mind, at the disposal of the nation. We cannot win this war unless we train every American to make his maximum contribution.

There must be an all-out effort on the education front. Let us be realistic. Every able-bodied boy is destined at the appointed age for the armed services. The *tempo* of war is such that a complex college education is impossible. Those able to go to college must devote this time to training for the specialized work which the services demand. Those who do not or cannot go to college must begin now, whether they're in school or out of school, to prepare themselves for the tasks which are for them inevitable and unavoidable.

Is this necessary? It is so necessary that all other values depend upon it? I'm passing on to you, to the educators of America, these lines that every person in the army responsible for the training of men constantly keeps before him: *Be sure that no American soldier is killed or injured because you failed to do your part to provide adequate training.*

If problems of school administration arise, you must find ways of solving them. If teachers are needed, you must find them. If your teachers need in-service training, the schools and colleges must furnish the training. This is part of an all-out effort on the education front. Great Britain has adopted pre-induction training as a part of its war program. Russia and Canada have done it. And yes, Germany, Japan, and Italy have done it. America can do it. America must do it—now.

PROFESSIONALLY TRAINED MANPOWER NEEDED

Professionally trained manpower is needed by your army today as never before in our nation's history. Supplying this need is the way in which the colleges of America can take part in all-out effort on the education front.

The schools and colleges of America must see to it that every boy and girl has been given specific education for military or civilian participation in the war effort. They must build up in youth a real understanding of the issues involved in this war. Guidance must be given youth in the physical, mental, and other requirements for various specializations in the armed forces so that every individual can do that for which he is best fitted.

The schools of America must provide an education—basic reading, writing, and arithmetic—for those 200,000 men who because of illiteracy are unable to take up arms for their country. Your army has neither the time nor the facilities to teach these three R's. It is you, not the army, who must do the job for which your experience is best fitted.

The schools and colleges of America must help to provide instruction for civilians, both men and women, who will not be called upon to wear the uniform but whose specialized training can be utilized by the government.

HOW TO CARRY OUT THIS PROGRAM

The War Department is supplying the United States Office of Education with lists of its needs by different categories of specialties. We're telling the Office of Education that we need men with knowledge of physics, mathematics, the fundamentals of radio, principles of mechanics, electrical shop work, automotive mechanics, and all the other basic specialized training essential for development of an efficient army.

TEACHERS' TECHNICAL MANUALS AVAILABLE

But more than just stating our needs, we're preparing outlines and making available technical manuals that will help you in filling these needs. Based on War Department technical manuals the course includes background knowledge and skill which contribute toward twenty-nine army occupations. All extraneous material is eliminated. Teaching aids are suggested, references are listed for pupil and teacher, demonstrations and laboratory exercises are listed, visual aids are recommended, and problems and projects are given.

Bear in mind that this is a ninety-hour course. This is ninety hours you have served your Army. Multiply that by the thousands of men we need with such training. Multiply it by other courses you can give. Surely you will make certain now that no American soldier is ever killed or injured because you failed to do your part to provide adequate training.

I want you to tell Bill Jones that when he has successfully completed a pre-induction course he'll be given a certificate. I want you to tell Bill Jones that that certificate, presented at an army reception center, will enable him to do an army job for which he is equipped and a job that the army must get done. Let's call these pre-induction training certificates *Victory Certificates*. For Bill Jones, and the thousands of other Bill Jones' you turn over to the army, will put us on the road to VICTORY.

Schools in Wartime*

HONORABLE PAUL V. McNUTT

*Federal Security Administrator and Chairman of the War Manpower Commission,
Washington, D. C.*

Only a few weeks ago a boy in uniform walked into a Middle West high school. He wore on his shoulder the insignia of the army air forces, and there was pride in his step. He was home on ten days' leave, and he was visiting the high school from which he had recently been graduated. The principal gave the boy a warm welcome and, of course, asked how he was getting on in the army. The young soldier replied, "I'm getting along fine. I'm a sergeant in the air force mechanic service, and, believe me, Mr. Jones, that math course I took from you certainly helped a lot."

Everywhere in our nation, soldiers and sailors on leave are calling on their former teachers with stories like that. These little incidents bring home to us the new relation of education to a new kind of war. Very few soldiers visited their high schools in the first World War, because only 4% of the dough-boys of 1917 had completed high school. The Office of Education informs me that 41% of the present Army are high-school graduates. In 1917 a high-school mathematics course was no particular help to a man carrying a rifle. But today's army is an army of experts—trained for special jobs. Nearly every man in a typical 120 men is a specialist at some military job. Both the army and the navy right now are crying for skilled mechanics, engineers, and radio technicians. War industries are also crying for trained men and women. One navy expert even went so far as to say, "When the battle fleets meet in the Pacific, victory will go to the side with the best mathematicians." The United States government needs education today as it never did in the history of our nation. Our schools are part of our victory production assembly lines. Our schools are also part of the army and the navy training program.

THE ARMY OF EDUCATION

What I said to the United States Office of Education War-time Commission when it was organized just sixteen days after Pearl Harbor is even more true today. I asked these leaders of American education to tell teachers and school officials everywhere, "You're in the army now." And what an army it is! If the forces of education were to march in review past the White House at standard army pace twenty-four hours a day, it would take 160 days and nights for forty-eight state divisions to pass. If they began to march on Armistice Day, the last company of pupils would come by on Easter. This great army of education has served its country well. No army or navy in the world can enter the conflict with fighters as well schooled as the United States army and navy. This counts in mechanized modern warfare. Victory may yet be

*Address before the National Institute on Education and the War, sponsored by the U. S. Office of Education War-time Commission, August 28-31, 1942, in Washington, D. C.

the product of our educational preparedness. Look what education has done.

In the rush of events, few remember that less than two months after the Germans marched into Holland, vocational schools of our nation called back their teachers from summer vacations. Few know that within four months these schools would provide training essential for more than 250,000 workers recruited for war industries. Few know that more than 1,500 vocational schools have trained some 3,000,000 men and women for work in war industries. Few know that our colleges and universities have provided special training that greatly increased the effective usefulness of more than a half million engineers, physicists, chemists, and management experts. The great Army of Education has earned its "E" for other extraordinary war deeds. When the Selective Service System wanted to register 17,000,000 men, it turned to the teachers. When the Office of Price Administration found it necessary to introduce rationing, the schools of America again shouldered the load. And last spring the school children of the nation showed what even grade-school youngsters could do to a paper shortage. These are distinguished achievements. But they may well rank as small in contrast to the assignments your government will give to education before victory is won.

A CALL TO OTHER WAR DUTIES

The United States Office of Education and the Office of Education War-time Commission are the key channels through which education is being mobilized in the service of the war effort. As Administrator of the Federal Security Agency in which that Office of Education is lodged, I represent the army of education. It is in this capacity that I now call on the schools, colleges, and libraries of the nation (through the United States Office of Education) to shoulder new and heavier war duties. First, I call on the elementary school children, in particular, to enlist in the salvage campaign. The large commercial sources of scrap have been gathered in. Now the government turns to pupils—millions of pupils—to scour back yards and attics for iron and rubber and other vital materials. I also call on all pupils and students to help the Treasury victory-savings campaign. Schools already have a splendid record. But the motto now should be: "We have just begun to save."

Every high school should carry out the recommendation of the U. S. Office of Education War-time Commission to give every pupil an opportunity to engage in war-time service. I will go farther than that. Every high-school teacher should qualify himself to counsel with his pupils so that the best capacity of his pupils may be developed for the nation's service. Today the nation needs pilots, mechanics, nurses, navigators, engineers, doctors. There will be no time for a man to feel his way. Little time to plug up the gaps in technical training. Every high-school pupil should regard himself as in the reserves. Many advanced students are today in the enlisted reserves but are completing their training. This serves to underscore the importance of techni-

cians to the military forces. It indicates the vision with which our colleagues of the army and the navy are planning their part of the job. There is no excuse for any young man or woman to be in college preparing for any profession not directly useful to the war effort. Through the ROTC and through student loans to accelerate training in certain technical fields we have the beginning of a national college war-reservist program. I hope to see this expanded to the point that every college student is formally enrolled as a reservist.

EDUCATION HAS PRIORITY

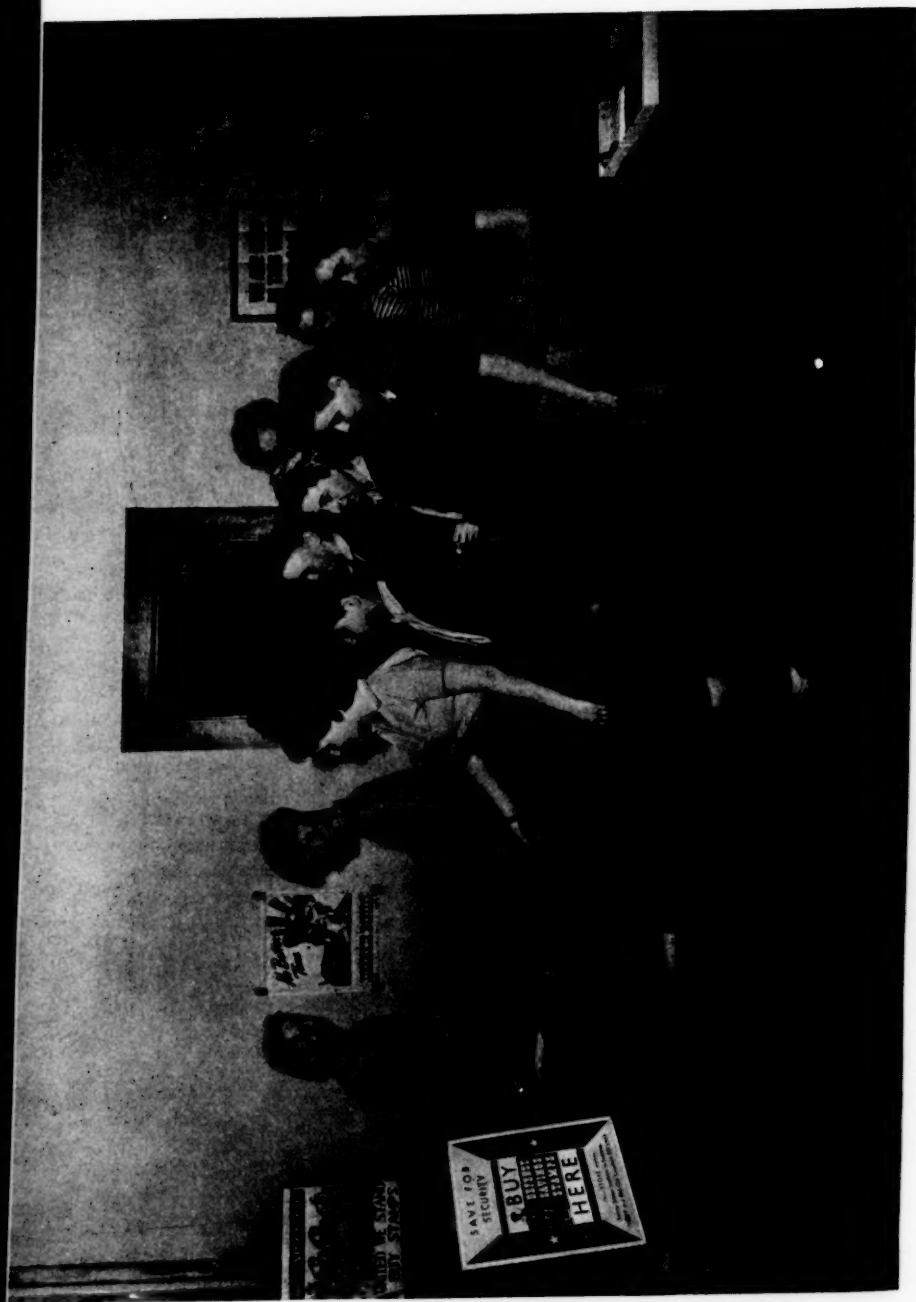
Some teachers have the mistaken idea that teaching is not war work. The nation's demands on the army of education should correct that misconception. Unless the army or the navy or war industries draft a teacher for work of higher priority rating, he should stay at his post. It is the patriotic duty of teachers to continue teaching, despite the lure of service on other fronts and despite the lure of higher wages.

It is not only a teacher's duty to stay at his post, but he must expect to carry heavier work loads than in peacetime. Teachers already know something about these extra duties. They know the extra hours for rationing and registration. They know what it means to train air-raid protection workers. But it is quite clear that the school and its staff will play a still larger role in the community as the war goes on. Schools must continue to be centers of learning, but they must also be centers of community service. Schools must be the company headquarters of the home front.

THE SCHOOLS NEVER CLOSE

Some of our vocational schools have put over their entrances signs which say WE NEVER CLOSE. And they are as good as their word. These schools operate around the calendar and around the clock. I give you that as a slogan for the army of education—WE NEVER CLOSE. I suggest that the school officials, the teachers, and the school boards of our nation reconsider their programs and their responsibilities. I urge you to put aside any thought of education as usual. Consider the war needs of your nation. Consider the emergency needs of your community. Remember that schools in most communities are the best equipped public service centers and have the best trained staffs.

There have been many definitions of education. I will give you a short one suited to this grave hour. Education is the shortest distance between two points. Our nation today is a contestant in the greatest war of all history. All our energies, all our resources of men and materials, are being mobilized to carry us from the position of contestant to another point—victory. Education can help us to shorten the distance to victory. Our army and navy are in themselves huge training institutions. Many of our industries maintain training-within-industry programs. But our schools, colleges, and libraries are the institutions to which we turn for basic training. The better they do their task, the shorter the road to victory.



The Pupils of the Roosevelt Junior High School of Erie, Pennsylvania, buy their War-Savings Stamps regularly.

What the Secondary Schools Can Do to Help Win This War*

JOHN W. STUDEBAKER

U. S. Commissioner of Education, Washington, D. C.

Daily the realization grows that we are in for a long hard struggle. Facts must be realistically faced. Japan is entrenched in Asia and upon islands in the Pacific; the Nazis are forging ahead in the Caucasus; each day presents new evidence of the tremendous effort that will be required to beat our enemies to the earth, to win back whole continents, and to free their enslaved inhabitants. As we read of American Rangers fighting in bloody commando raids along the coast of France; the valorous conduct of American "leathernecks" in the Solomon Islands; of the brilliant action of American pilots in Egypt and the courage of American sailors on the seven seas, we begin to understand the global character of the war; and we are made to realize what must yet be accomplished in turning the full energies of this powerful nation to the grim business of war—converting a peaceful industrial nation into a great engine of military might.

Only the dulllest sort of wishful thinking; only sheer blindness to reality, could cause any of us to doubt that education too must undertake conversion to the pressing business of total war. War is a hard, tough, brutal business. It is blood and sweat and tears; it is pain and heartache and frustration; it means plans deferred and careers interrupted—but it must be faced, just as the boys at Bataan faced it—with energy and resolution. We are in this war and the only way out is through—through to victory, through to survival for everything we hold dear; through to the chance to build a better world; a world in which all men, whatever their occupation or race or religion, may be free to walk erect in the full stature of their human worth.

That the schools should have moved rather slowly in making the great conversion from the business of peace to that of war was perhaps inevitable. The schools are civilization's great conservators. They transmit its culture to each new generation. Our American culture has been one of peace and productive enterprise. We are not a militaristic nation. Almost never before in our history have the schools had need to turn their full attention to the science of war. Hence it has been hard for our schools, just as it has been hard for our industries to think in military terms or to assume the military role. Yet as the crisis deepens, as we more and more gear ourselves for all-out total war the schools, too, must readjust their organizations and redirect their efforts toward one great end—the certain and speedy winning of the war. What, then, are some of the things the schools and colleges can do to help win this war?

*Address before General Session, National Institute on Education and the War, sponsored by the U. S. Office of Education War-time Commission, August 28-31, 1942, Washington, D. C.

In making the suggestions which follow I am mindful of the fact that what the schools can do this year to help win this war will be determined by the extent to which administrators, teachers, pupils, and parents are ready to face up to the stern necessities of war; by their willingness to break with tradition; by our own ability to abandon for the duration our vested, but at present non-essential, interests, our customary organization patterns and school programs.

WHAT THE ELEMENTARY SCHOOL CAN DO

My first suggestion concerns the elementary schools. Perhaps less than at any other level of education, does winning the war imply conversion in the curriculum of the elementary school. The fundamentals of childhood education, with their emphasis upon mental security, physical health and growth, and command of the tools of learning are not altered for the emergency. Moreover, millions of elementary school children will still be in school when victory is won. They must grow up to help in the long slow task of rebuilding the post-war world, of healing its rancors, of binding up its wounds, of creating that spirit of brotherhood which alone enables men to live at peace with their fellows. The special contributions which elementary schools can make to winning this war are therefore expansions of the kinds of tasks which they are already accomplishing: the care and protection of young children in nursery schools and kindergarten; the provision of before- and after-school programs of recreation for children of working mothers in congested war-service areas; the expansion of school facilities and services to include nutritious school lunches; closer co-operation with parents in safeguarding children's health and morale.

In addition, this year, our elementary schools can participate in vital war-related activities: such as campaigns of salvage and conservation; gardening, and food canning; caring for their clothing; purchasing war-savings stamps. In so doing the elementary schools can become organized communities of action in which principals, teachers, pupils and parents will co-operatively plan children's in-school and out-of-school war-related activities; working together with a common will; and in studying our hemisphere neighbors, and our allies in the United Nations; developing an understanding of democratic principles through daily practice in living them; gaining a balanced perspective on the war; by being helped to see that this war is a culmination of mankind's age-long struggle to be free; learning by working together in a common cause to understand and to appreciate others in spite of superficial differences.

WHAT THE SECONDARY SCHOOL CAN DO

If helping to win this war demands little basic change in the organization and program of elementary education, can the same thing be said for secondary education? Can the high schools go on doing business as usual, with only minor modifications in curriculum and organization? The answer which has

come out of this four-day institute on Education and the War is emphatically "No." We are faced with certain brutal facts. Fact number one is that wars are won by fighting men who use weapons produced by working men and women. The manpower requirements for winning this war are simply enormous. By this time next year we may have some six million men under arms; eventually we may have ten or twelve million. That means that the great majority of able-bodied males between eighteen and forty-five years of age must serve in our armed forces; and that in turn means that insofar as possible boys of sixteen and seventeen years now in our secondary schools must begin to prepare for military occupation. The modern army is made of specialists; mechanics, machine gunners, nurses, motorcycle drivers, radio operators, motor mechanics, sanitary technicians, engineers, and the like. To meet the growing and critical requirements of the armed forces for specialists the unused facilities of our trade and vocational schools, our general high schools, every training facility of the nation must be put to maximum use.

Again, just as the manpower needs of the armed forces are pyramiding, so are the manpower needs of war production, in factories and on farms. Here, in addition to training men not suited for military service, we face a task of replacement training; training of girls and women to replace men who have been called to the colors from farms and factories; training girls to replace men gone from stores and offices and from essential community-service occupations; training boys and girls to replace housewives employed outside the home.

Lest we should too keenly regret the necessity which requires this great conversion of our secondary schools from education for peace to education for war, please remember what happens when the Nazi slave drivers are in position to crack the whip over conquered peoples. Consider that more than 3,000,000 youngsters from the Balkan states have been rounded up for compulsory labor service in Germany; that Gestapo agents in Belgium are capturing mere boys for military service. Remember also that the skills and abilities which youth must develop for service in the war effort are not wholly unlike those which they will find valuable for work when peace is won. Just as there are great possibilities of transfer in skills and abilities of peace-time occupations to military uses—witness the rapid conversion of the automobile factories to the making of tanks, planes, and guns—so there are similarly large possibilities for the transfer of technical and vocational skills from military to civil life. In any event the secondary schools appear to be due for a rapid and rather thoroughgoing curriculum conversion if they are to be most effective in assisting the nation's war effort. What are some of the elements in this curriculum conversion?

CURRICULUM CONVERSION NEEDED

First, there must be greatly improved facilities for occupational information and guidance into critical services. Here is involved the flow of manpower,

its distribution into those channels of military and civilian need which must be met if this war is to be won. Never before have those responsible for the guidance and advisement of youth been confronted with a greater challenge. School counselors must have authentic information not alone as to the capabilities of particular youth; they must also have information concerning the critical needs of the nation for manpower with certain types of preliminary preparation. Which boys should be advised to undertake preliminary preparation looking toward meeting the need for air crews to man our growing air armada; or ground crews to service and repair thousands of planes? How many such aircrew men may be needed? If the need is for thirty per cent of the boys in this year's graduating class, will each school meet its quota? These are the kinds of questions which the guidance officers in our secondary schools must ask, and for which they must find satisfactory answers—not only for aviation, but also for engineering, and medicine, and nursing, and a variety of military and civilian specialists.

Second, there must be a new emphasis upon programs of physical fitness. Strength, stamina, endurance, and functional vigor are demanded above all else in wartime. The development of general motor skills can be achieved in a variety of ways: through formal calisthenics and body-building exercises; running, jumping and climbing; competitive team sports; hiking, swimming, tumbling, wrestling. Every secondary-school boy and girl must be given the opportunity to participate in a program of physical activities appropriate to his or her interests and abilities, and geared to national needs. The physical-fitness program should also include health instruction; knowledge and practice of the principles of nutrition; it should provide for physical examinations, especially in the cases of those whose need is fairly obvious; and for follow-up and correction of remediable physical defects. For some elements in this program the secondary schools will necessarily solicit the aid of other community agencies; but for the physical fitness program as a whole, the secondary school cannot escape responsibility.

A *third* element in the secondary-school program of curriculum conversion concerns mathematics and science. Modern war is a battle of technicians and specialists, both in the combat forces and in the army of workers in industry. The basic language of technology is derived from science and mathematics. Our secondary schools must see to it this year that larger numbers of pupils gain a more thorough mastery of those subjects. Army and navy officials are most emphatically in favor of this emphasis for boys who will enter the armed forces. Two types of curriculum change seem needed: 1. Revisions of mathematics and science content to provide military illustrations and applications. 2. A new drive toward more complete mastery and some ability to transfer mathematical and scientific learnings to practical situations.

A *fourth* element in the secondary-school program of curriculum conver-

sion is for the introduction of pre-flight courses in aeronautics in thousands of the nation's secondary schools. Control of the air in modern warfare is an essential prerequisite for successful land or sea operations. We are in the process of developing the greatest air force in the world. To meet the anticipated needs of the armed services for flight-crew officers alone, there is every indication that we must interest all qualified boys in the junior and senior classes of our secondary schools in becoming candidates for aviation training on a pre-flight basis. Every boy who can meet the stringent physical and mental qualifications established for admission to aviation-cadet training or has a fair chance to be able to meet them a year or two hence should receive in the secondary schools next year the best kind of pre-flight training for aviation that we are able to provide. The very minimum provision which should be available in every secondary school of the United States would be the opportunity to pursue basic and thoroughly taught courses in mathematics and physics. To this provision should also be added a program of physical fitness including the remedying of correctible defects. In thousands of secondary schools also it should be possible to introduce a course in the science of aeronautics during the junior or senior year, or both. This course should provide for a study of aircraft structures, aerodynamics, power plants, meteorology, communication, and elementary air navigation. Such pre-flight training in aeronautics if given in addition to the necessary foundation of mathematics and science, will constitute, for thousands of secondary-school youth, one of the most important contributions that schools can make to the winning of this war.

A *fifth* element in the secondary-school program of curriculum conversion is concerned with one of the secondary school's major and continuing responsibilities, that is, training of youth for citizenship in a democracy. English and the social studies are the most important vehicles which the secondary schools generally use for this purpose, together with such informal activities in service to the school and to the community as may be used to teach the responsibilities of citizenship. Both English and the social studies need now to be re-directed to war-time objectives. In English, special emphasis must be placed upon the development of fundamental reading skills; upon clear, concise oral and written expression; upon the literature of patriotism and American idealism; of current events and war problems. In social studies there should be more positive teaching of the meaning of democracy; of our history, heroes, and traditions. There should be instruction concerning matters of war-time economics. There should be a new emphasis upon the development of geographical concepts; upon an understanding of the working of government in wartime. The organization of and opportunities in the armed forces and the purposes and procedures of the Selective Service should be taught in the classroom.

Another important aspect of the schools' responsibility for war-time citizenship training is the development of an understanding and appreciation of our allies in the United Nations. Without in any way distracting us from the all-important business of winning the war, it should be possible to lay that foundation in public opinion which will make possible the winning of the peace as well. In this winning of the peace, the United Nations must stand and work together as in the war itself. To this end it is urgently necessary that we come to a fuller understanding and appreciation of each other, so that in the formulation and proclamation of common objectives, we may insure that spirit of neighborliness and mutual trust and co-operation without which the ends for which we fight together, may be made more difficult of attainment when military victory is won. In the words of Secretary Hull, "This is a task of intensive study, hard thinking, broad vision, and leadership—not for governments alone, but for parents, and teachers, and clergymen, and all those, within each nation, who provide spiritual, moral, and intellectual guidance. Never did so great and so compelling a duty in this respect devolve upon those who are in positions of responsibility, public and private."

The *sixth* element in the secondary-school program of curriculum conversion which I shall mention involves the greatest wrench to existing practices; yet it is perhaps most important of all. This element is the provision of pre-induction training for the armed forces and preparatory training for civilian occupations and services. At the present time our expanding army and navy are in critical need of many more specialists than are being recruited by the draft lottery or by voluntary enlistment. The facilities in our trade and vocational schools, and in our more general high schools must be used to whatever extent is practicable in the preliminary preparation of auto-mechanics, radio operators and repairmen, machinists, typists, cooks, and a host of other specialists. For a number of families of occupational specialties in which critical needs exist in the armed forces, modified courses in physical science and industrial arts provide the kind of preliminary preparation which training authorities in the armed forces say is needed. Outlines for some of these modified courses of a beginning specialist character are now in preparation by the Office of Education and the Pre-Induction Training Section of the Army Services of Supply working jointly. Already available is an outline of a *Pre-flight Aeronautics* course as preliminary preparation of prospective aviation cadets.

The provision of preparatory courses for secondary-school youth who are looking toward employment in war production industries is chiefly a matter of expanding and re-directing the regular program of vocational education, especially as it involves the training of girls; and in addition providing for the enrolment of senior girls in the Federally-financed vocational program.

¹From the text of Secretary Hull's radio address of Thursday, July 23, 1942.

OBSTACLES TO OVERCOME

I realize that there are serious obstacles to be overcome in converting the secondary-school curriculum to make it serve the war effort. Problems involved in securing courses of study and equipment, of certificating and holding qualified teachers, of arranging for accreditation of new courses, of adjusting school-time schedules to provide part-time work and part-time schooling, of public relations and community acceptance; all must be faced and overcome. I am confident that the resourcefulness and ingenuity of school officials, if spurred on by a sufficient sense of the urgency of the need for curriculum conversion, will find ways and means of accomplishing the seemingly impossible. Given educational vision and a sense of urgency among school administrators, secondary-school youth, their parents, the community in general can be relied on to help in many ways. The enthusiasm and will of youth to serve can be organized and channeled through a school-wide student organization affiliating secondary-school youth in a national program of participation in present war-service activities and in preparatory training.

THE COLLEGES SHARE IN THE PROGRAM

When we ask what the colleges and universities can do this year to help win this war we enter an area in which there are also many perplexing problems. Of some generalizations, however, we can speak with assurance. The colleges and universities can adjust their entrance requirements so as to serve every qualified student who needs the services of the college to prepare him for war work. This involves active co-operation with the secondary-schools to identify those students who ought to enter college without meeting all of the usual entrance requirements, some of which, be it frankly confessed, have heretofore primarily served to keep certain youth of good talents but of questionable academic respectability out of these institutions of higher learning.

Next year we shall probably find many secondary-school pupils, for example, who are fully ready to begin engineering training without having taken foreign language or even without completing sixteen units of high-school credit. We might also be able to discover many young adults, who dropped out of high school a few years ago, intellectually capable and desirous of preparing themselves for technical war work. Colleges should admit them.

Again, guidance plans worked out by co-operation between secondary schools and colleges should enable selected high-school pupils to enter at appropriate dates the colleges operating accelerated programs, even though the time schedules of high school and college have not been fully synchronized. In many cases individual high-school pupils who will not have fully met the requirements for secondary-school graduation should be allowed to transfer to colleges in January, March, or May.

What Can an Intelligent Teacher Think and Do About the War?*

ELMER DAVIS

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The title given to this talk somewhat perplexes me. To try to tell intelligent teachers what they ought to think seems a contradiction in terms. What they ought to do, of course, is to teach; but I expect that for the last two days people have been telling you what you ought to teach, so there may not be much left. However, I will venture to emphasize some few things that are indeed being taught already; but that everyone who is engaged in education, whether dealing with children or with adults, has got to teach and go on teaching, not only now but so long as the need endures.

WHAT TO TEACH

Teach them, to begin with, that they are living in historic times—more historic than any they have ever read about in the histories; that this is no ordinary war and no ordinary crisis, but probably the greatest turning point in human destiny, to date. Science and technology have given us the tools which could build a better world than anyone could have imagined a few decades ago; or which could blow us right back into savagery. More than ever before, the human race has its destiny in its own hands barring some unpredictable astronomical catastrophe, the future will be what men make it. Teach your students, then, that our future will be what we are strong enough, and resolute enough, and intelligent enough to make it, against the opposition of able and ruthless men who are determined to make it something else. Teach them that there is no Santa Claus; that we will get no more than we work for, and that unless we work hard enough and intelligently enough we shall be worse off than we could ever have imagined. Above all, teach them that when we have won the war the crisis will not be over—will indeed have come to its most critical stage; that we can't afford to stop working and stop thinking when the shooting stops. Teach them that when they wake up tomorrow morning it won't be yesterday; that there is no going back—to normalcy, to a golden age real or imagined, or to an age which if not golden was at any rate familiar and comprehensible. Whether we like it or not, we have to go ahead, in one direction or the other—up, or down.

The Chinese word for crisis, which I learn from Mr. James G. Reston's recent book, *Prelude to Victory*, is written with two characters meaning, respectively, danger and opportunity. There is opportunity as well as danger in this war; and there will be danger as well as opportunity in the years of transition when we are trying to bring the world back from a state of war to genuine

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peace. Just now the danger is the more apparent; yet I sometimes wonder if it is apparent enough, to people who by the accident of geography live far away from any scene of action, and it is the job of education to make it real.

Teach your students that the earth is round. We all know that; but we are so used to looking at flat maps that at best we are likely to think of it as round like a cylinder, not round like a ball. Teach them the real relations of space and distance, on this globe; teach them that while we talk now of a two-ocean navy, we may eventually have to think of a three-frontier air force, for the continent of North America. Teach them that the shortest route from this country to a good part of the Old World is across the North Pole; and that frontier might need defense, in the next war if not this one, unless we are smart enough not to have a next war. Teach them what a global war really means—that what happens in Libya or in Malaya may make a difference in what happens in Oklahoma or Nebraska. Why has the boy who used to live next door to you gone off to the Solomon Islands, which he had probably never heard of a year ago? Why, he is fighting in the Solomons to keep the war away from home; and any of the people who have experienced the war at home can tell you that keeping it away is worth considerable effort. Teach your students that; and teach them too that we are trying to win a war in Europe and the far Pacific because we have a better chance to win it there than if we waited for it to come home to us.

Teach them that a total war affects the life of every citizen and that its outcome will be affected in some slight degree by what every citizen does. There is no question of the willingness of the American people to do what may be necessary to win the war; but it is our job to show them how many things, different and sometimes apparently irrelevant things are going to be necessary. There are plenty of men who would be willing to die for their country, if the occasion arose; but the occasion does not arise, and in the meantime they are unwilling to drive so slowly as thirty-five miles an hour for their country.

Teach your students what kind of people we are fighting. They are able men and they mean business. When Admiral Yamamoto, last December, said that he intended to dictate peace in the White House, most of us took it as a joke; but Yamamoto meant it, and before long his men were a couple of thousand miles nearer the White House than when he said it. They would be nearer than that now but for the victory at Midway. Teach your students that the leaders of Japan, and of Germany, have taught their peoples that they are master races, with God-given right to rule everybody else—including us; and that an immense number of Japanese and Germans really believe it. Teach your students what it feels like to be conquered by such people—there is plenty of evidence, from Europe and Asia too. Try to make them understand what it means to live in a country where any man may be tortured to death, by men

who like to torture people, for no other crime than refusal to take orders from the master race; where a dozen men might be picked at random and shot in so-called reprisal for something they never heard of—the killing, by somebody else, of a member of the master race; a country where children starve to death because the food is taken away from them by the master race. There are plenty of countries like that; the countries that failed to stop the enemy.

Remember that the men we are fighting, the leaders and many millions of their followers, believe that anything goes, if it advances the interest of their own nation. We were infuriated by the treacherous attack on Pearl Harbor while the Japanese were still talking peace; but Hitler has attacked half a dozen nations in Europe while he was still talking peace. Remember that, when he starts talking peace again—as he conceivably might this winter, by roundabout methods, if the fighting does not go well enough to suit him this fall. Remember that to make peace with men like Hitler and the Japanese militarists would only be to let ourselves in for new and bigger Pearl Harbors, whenever they thought the moment was favorable; that we should have to remain so heavily armed, so heavily militarized, in anticipation of such attacks, that peace would be very little different from war. Teach your students that there is no use making peace with men who attack you in time of peace; that there is no safety, for us or anybody, until those men are beaten down. Teach them, in short, the kind of world they live in. It is not the kind of world any of us would like to live in; but we are not going to live in it very long, or very successfully, unless we know what it is like and what we have to do about it.

THE EDUCATOR HAS A DIFFICULT TASK AHEAD

Well—after we have done something about it, after the enemy is beaten down, then education is going to have its toughest job. For it is going to have to fight the natural human tendency, after a great effort, to sit back and rest, to take it easy for a while. And every educator will have the unpleasant duty of telling his students, whether children or adults, that then above all times we cannot afford to take it easy, unless we want to run the risk of having this thing to do all over again in another twenty-five years. H. G. Wells, writing just after the last war, described the situation of humanity at that time as a race between education and catastrophe. As we all know, catastrophe won that race; but if the United Nations win this war education has one more chance. And quite possibly just one more chance; for if we lose the next race, the next catastrophe will be a bigger and better catastrophe, which might close this phase of the development of the human species, and compel such specimens of it as might survive to start all over again, from the point we started from several thousand years ago.

This crucial point in human development—a point from which we may go onward and upward, fast, or backward and downward even faster—this point has been reached, of course, because of technological developments; but

primarily because of one single invention which has changed human life more than anything else since the discovery of how to make fire. This world would be a far more comfortable place to live in, and the prospects of the human race would be considerably more encouraging, if a couple of young men in Dayton, Ohio, some forty years ago, had been content to stick to their business of repairing bicycles; instead of wasting their time and what little money they had on an enterprise which the best scientific opinion of the day agreed was impossible. But the Wright brothers stubbornly went ahead and ate of the tree of knowledge; and the result was the transformation of human life from a two-dimensional to a three-dimensional activity, several thousand years before human nature was ready for the additional responsibilities thus entailed. The problem of education, and statesmanship, after this war, is basically the problem of how, or whether, the human race is going to be able to live with the bombing plane—a symbiosis apparently never contemplated by nature, but one which we have got to work out if we are to go on at all.

I suppose most of you have read Major de Seversky's book—an evangelistic document which is of dubious value as a guide to the contemporary world. Essentially, Seversky is not writing about this war, but about the next one. Those bombing planes that start from Kansas City, or thereabouts, and blast Tokyo, and come back home again—they do not now exist, and are not likely to make their appearance in this war. But it would be a very reckless man who would predict that twenty-five years from now, we might not have bombing planes that could fly from Kansas City to Tokyo—or from Tokyo to Kansas City. And when we have got that far there will be no safe place on earth, unless somehow the human race can develop sufficient intelligence to make the whole earth safe.

I do not know how that can be done, or even if it can be done; but it requires no great insight to predict that unless it is done, what we call civilization may not outlast the twentieth century. This obvious point need not be labored; in theory, practically everybody in this country, indeed in most countries, will agree on the desirability of preventing the next war, if we can. But as to how, there will certainly be much argument, perhaps bitter argument. It is hardly likely to be partisan argument, this time; leaders of both parties are agreed on the need of recognizing this nation's international responsibilities. But there can be plenty of honest disagreement on details, and there are likely to be plenty of honest mistakes in trying to work it out.

WHAT THE TEACHER CAN DO

And what can the intelligent teacher do about all that? Well, he can try to make his people keep their eyes fixed on the essential points. He can remind them that practical operation is more important than theoretical principles; that slogans such as nationalism *versus* internationalism are likely to be misleading and confusing, in a situation where practical success is likely to call

for a mixture of both. In the latest official pronouncement of our policy, Secretary Hull's speech of July 23, it was declared that "it is plain that some international agency must be created which can—by force, if necessary—keep the peace among the nations in the future." But Mr. Hull also said that "the nations of the world will then be able to go forward in the manner of their own choosing." Here obviously is neither complete nationalism nor complete internationalism, as now understood; people who stand on either as a principle are likely to be less useful than those who are willing to mix them up in whatever proportions prove most practically useful.

Further, the teacher should remember, and remind his pupils, that, as Mr. Hull says, "neither victory nor any form of post-war settlement will of itself create a millennium." Millennial hopes were widely current at the end of the last war; the great collective effort of 1918 had made people realize what the human race could accomplish, with a reasonable degree of co-operation; and when co-operation failed, when the millennial dreams were disappointed, too many people rushed to the opposite extreme of cynicism and apathy. We ought to know better this time. As Alexander Hamilton said, it is useless to expect a perfect work from imperfect man. Hamilton said that, however, in discussion of a constitution which in his opinion was quite imperfect; but which he was prepared to accept and try to operate because he thought it was the best that could be got. And in fact, it operated and is still operating pretty well. Which may be a hopeful omen if we can be as realistic as Hamilton and take the best we can get.

But above all the teacher should constantly teach that this time we can't afford to sit back and take it easy, we can't afford to let up; we have got to go on, however much we may dislike it, with the hard and uncomfortable labor of thinking. Many people would like to believe that victory would restore the world as it used to be; but it won't. Whether you found that world comfortable and satisfactory or not—some did and some didn't—it is not coming back; we are going to have a different kind of world to deal with, a world which can be made not only satisfactory, but more satisfactory eventually than anything we have ever known—but could be made so only by intelligent, cohesive, and unremitting effort. Frail human nature is not too hospitable to unremitting effort, except under the spur of necessity; it is your job as teachers to keep reminding people of the necessity. Issues may arise about which there will be protest that it costs too much, it takes too much work, it isn't practical. Examine those specific complaints by all means and see what there is in them; but never forget, never let the public forget, that the alternative to finding something that will work is a world, for our children, in which bombing planes can fly from Tokyo to Kansas City; and architecture will have become the art of finding how people can live and work, with the least discomfort, underground.

The Agricultural Part of the War Program*

HONORABLE CLAUDE R. WICKARD

Secretary of Agriculture, U. S. Department of Agriculture, Washington, D. C.

Your profession has had much to do with deciding whether America wins or loses its present fight for survival as a free nation. From the educators, the men who are doing the fighting and the civilians who are supplying them have drawn much of their beliefs about the worth of the system we are fighting to preserve. From educators they also have learned habits of thinking and working which are now being put to the tough test of war.

From you this year, thirty million students will draw their mental and emotional pictures of what goes on and how and why in this nation's war. They will receive instruction on the duties of the civilian family in wartime. In millions of homes your leadership will leave its mark during the months ahead. So I felt duty bound to accept John Studebaker's invitation to counsel with you this evening on the agricultural part of the war program. The nation needs your understanding of this and every other part of the war program. The nation needs your help in making the program effective.

Dr. Studebaker tells me you want to know the purposes of the agricultural program and how the governmental part of it works. I am glad to tell you. I will also, with your leave, give you some of my ideas on how you may join with the agencies of the Department of Agriculture in helping make the program work.

Neither you nor I can operate the agricultural part or any other part of the war program for civilians, any more than we can operate the military program. Ultimately, the soldiers and sailors and marines have to make the military program work. Ultimately, the farmers and workers and homemakers have to make the civilian war program work. The part of public servants is to help the farmers and workers and homemakers do the ultimate job. In the Department of Agriculture offices and laboratories we do not grow food or fiber; we do not ship it, or process it, or store it, or feed it to families. We simply help farmers grow food and fiber, help other people process it into the proper forms and get it to the place where it is to be used. We help consumers put it to the best use for health and strength to fight their part of the war.

FARM PRODUCTION REACHES A NEW-TIME HIGH

The farmers whom we serve with various government aids have done a magnificent job of production this year. After surveying the war-time needs for food and fiber for our fighting forces, our allies, and our civilians, we set up a goal of six per cent more total farm production this year than last year. Last year's production set a new high record for all time, on top of a previous

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new high record established in 1940. It looked like a superhuman assignment to set a new record for the third year in a row. But farmers have done it. Present indications are that they will go nine per cent above 1941 in total production for a breath-taking new production total. How breath-taking, you will realize from the fact that it is twenty-five per cent above the average for the five pre-war years, 1935 to 1939.

The production has been a planned production for war purposes. It has been in accordance with goals set a year ago now and revised after Pearl Harbor. The most vital victory on the farm front has been the huge increase in oil crops, off-setting the loss of one billion pounds of vegetable oil imports shut off by war in the South Pacific. The great food and raw material weakness of the Axis is lack of fats. If we can keep a good balance of these vital substances, as we have done this year, it will count heavily for eventual victory. Hardly less notable among the farm victories of the 1942 campaign is the all-time high record for production of animal protein foods—milk, meat, and eggs. These are the foods most craved by fighting men, by hard-working civilians in this country, by the fighting forces and the war workers of our Allies in England and Russia. They are getting these foods from American farms. Also, near-record quantities of fruits and vegetables are coming from those farms. As for the bread grains, we continue to have a siege-proof supply of them. As a matter of fact, our crop of wheat is so great we are having trouble in getting it all under roof.

Crop acreage is up from 332 million last year to 340 million this year, and the forage harvest is a huge one. There have been few idle acres in America this year. There have been fewer idle hands on American farms. The farm families, and I mean women and children as well as men, are working the longest hours of any group in the country. They have to in order to make the harvest the biggest output of all time. The supply of hired labor steadily grows shorter as the military forces take the young men, and both younger and older men are drawn into expanding war industry.

FACTORS CONTRIBUTING TO THIS RECORD

Many factors played a part in this year's record farm production. Most important, of course, was the co-operation and devotion of the farm people. They learned this co-operation through nine years of operating a National Farm Program. This co-operation enabled the six million families to act as one in operating their farms so as to reach the goals set by the Department of Agriculture. Another factor in the record production was the devotion of the farm people. They knew what their war job was and they went at it with a will surpassed by no other group in the country. A third factor was the farming skill accumulated through a half century of schooling in the world's greatest agricultural educational system operated by the colleges and schools

represented here co-operating with the Department of Agriculture. They had the great advantage of having on hand a great store of reserve feed accumulated in the Ever Normal Granary which they had built through the National Farm Program. They had fertility stored in the soil through the conservation phases of the National Farm Program. Not least among the favoring factors was the best growing weather, taking the country as a whole, in more than a decade.

Most of these favorable factors will persist into 1943—the discipline and devotion of the people on farms, their know-how, and a heavy reserve of feed and soil fertility. But the weather is, of course, an uncertain quantity. We can't expect it to stay favorable all through the war. And a good many handicaps which war brought in mild form this year will be present in aggravated form next year. Military service will draw off still more young farm men. Some more will go into war industry perhaps. Steel for new machinery will be scarce. Nitrogenous fertilizers will be less plentiful. The tires will be wearing out on trucks and other necessary farm equipment.

But even though it will be a harder pull than the hard pull of this year, we are going to have to ask for stepped up production in several lines. I cannot now give you the detailed goals for farm production in 1943. Those will not be ready until late fall. We must do a much more precise job in calculating goals this year than we did last year, for the resources we have must be applied so that every hour of man labor and every acre of land will make its maximum contribution. We can't afford in 1943 to grow things that will not be needed. We can't afford not to grow the things that will be needed.

THE COMBINED FOOD BOARD

The process of formulating the goals begins with what happens half the world away across the seas. In this war, the total food supply of the United Nations has to be regarded as one great stockpile, to be used as the common needs dictate. The first step in setting the marks for American farm production is to see what needs of the United Nations must be supplied by the United States. This survey is underway now by the Combined Food Board of the United States and the United Kingdom, on which I represent the United States and Mr. R. H. Brand of the British Food Mission represents the United Kingdom. We will report our calculations on world needs for United States products to the Foods Requirements Committee of the War Production Board, of which I serve as chairman. On this committee are represented besides the Department of Agriculture, the Army, the Navy, the appropriate branches of the WPB, the Lend-Lease Administration, the Board of Economic Warfare, the State Department, and the Office of Price Administration.

The Board, drawing on information from each of these agencies, will calculate American needs for the military forces and the civilians. Then,

combining our own needs and the needs of our allies, it will report to the Department of Agriculture the total needs for the various crops and livestock.

The Department will then establish the goals for production in each farming line. It will set up a schedule of aids in the form of AAA payments, Commodity Credit Corporation loans, and support price levels bolstered by the Agricultural Marketing Administration's Lend-Lease purchases and buying through The Food Stamp program, for school lunches, and for Red Cross use. These aids will be designed to help farmers make the needed switches among the various lines of crop and livestock production. They also will give farmers the assurance needed for sustained high production.

STATE WAR BOARDS

The national goals then will be broken down to State goals. The State goals, and the aids in the form of payments, loans, and support prices will be reported to the state U. S. Department of Agriculture War Boards. The War Boards were established fifteen months ago in each state and county. The members are the head officers of Department agencies located in each State and County. The purpose of the Boards is to bring together into a close-knit team all of the Department workers and services so they may be of maximum service to farmers. The state War Boards will report county goals to the county USDA War Boards.

Farm by farm in each county, the goals will be translated into crop- and livestock-production schedules for each farm. This will be done by farmer AAA committeemen, elected by their neighbors. They will take to their neighbors the story of the goals for the county, and ask each man to carry his share of the responsibility for each line of production, by signing up a farm plan for 1943.

Then will come the long slow pull of meeting the production schedule on six million farms. The war-time services of the Department of Agriculture are available to back up the skill and the energy of the farm families at many points. For financing, they may draw upon the facilities of the Farm Credit Administration if they have bankable security. The less fortunate farm families are financed by Farm Security Administration loans. These loans, by the way, constitute one of our greatest war-time means of tapping unused manpower. The lower income farm people have not had large enough production to provide full-time work for the family the year round. Many of them have lacked the know-how of farming or have been in poor health. The Food for Freedom call opens opportunities to them for new lines of larger production. The Farm Security program helps them accept the opportunity, and their greater production helps reach our goals.

For technical knowledge of how to produce the most per hour of work and per acre of land, all farmers draw in wartime as never before on the Ex-

tension Services. They also get from the Extension Services, through the war-time system of 800,000 volunteer neighborhood leaders information on the whole farm program, and its relation to the whole war program. This educational arm of the national agricultural public service is working at top speed and with customary effectiveness. For technical "know-how" in the conservation methods which increase production, and for some actual technical services, farmers in soil conservation districts call upon the aid of the Soil Conservation Service.

Aid in putting electricity to work at the Food for Freedom job, goes from the Rural Electrification Administration to more than a million members of REA co-ops.

When the crops get ready for market, the great variety of marketing helps—market news service, grading and standardization, and regulation of the public markets and practices of operators in the trades are available from the Agricultural Marketing Administration. Beyond that, the AMA in war-time is providing help by establishing markets for new crops where there were none before. An example is the egg-marketing program in the southeastern states which has greatly expanded the egg production thereby providing an assured commercial outlet.

These are some sketchy examples of the way in which, through the state and county War Boards, the services of all Department of Agriculture agencies are focussed on helping farmers meet their production goals. New services are being added as the need arises, administered through the War Boards, and oftentimes in co-operation with agencies of government outside the Department of Agriculture. Commodity Credit Corporation has made special arrangements to provide seed peanuts and seed soybeans of the correct varieties for the great expansion in these crops. CCC also has provided pre-fabricated grain bins for sale to farmers whose wheat otherwise would have had to lie on the ground. Arrangements for pooling of truck transportation are being made through the War Boards. The AAA program has made it possible to raise great quantities of winter legume seed in the Pacific northwest, and get it into the hands of farmers in the southeast who need it desperately in order to make up for the shortage of nitrogenous fertilizers.

The War Boards as War Boards perform many war-time services for farmers, in addition to organizing and co-ordinating the services of the individual department agencies. As agents of the WPB, the War Boards certify applications for building materials to put up farm structures. The War Boards organize salvage campaigns for scrap iron and other materials. The War Boards will handle the rationing of machinery and materials if such rationing becomes necessary. There are literally dozens of such special war jobs for the War Boards to take on.

IMPORTING WORKERS

Adequate labor supply is the Number One war-time problem of farmers. Acting under directives of the War Manpower Commission, and with the help of an arrangement with the Mexican government negotiated by the State Department, we are moving to give help in solving this problem. We are providing government aid in transporting both domestic and Mexican workers into areas of critical shortage. Given authority and funds by Congress we hope later to expand this program greatly. It will supplement the services of recruiting labor carried on jointly by the United States Employment Service and the War Boards, through the farm-labor subcommittees. Other supplemental services operating in part through the schools are bringing townspeople and husky boys to the farms at critical seasons of peak labor load. We will need all these aids and more if we are to reach our goals in 1943.

THE AGRICULTURAL MARKETING ADMINISTRATION

The war-time food job does not stop when the product leaves the farm. It has only begun. Food is not truly produced until it is on the table before the soldier or the worker. In between are a multitude of processing and transporting and storing operations. The Department of Agriculture's services are called upon time after time along this road from the field to the mess hall or the dining room. The buying of food for Lend-Lease shipment to our Allies is the job of the Agricultural Marketing Administration. A huge job it is. A business of some \$5,000,000 a day. It involves far more than the buying. It requires making arrangements for the establishment of new processing plants to turn out the kinds of food needed in wartime. We have had a part, for example, in expanding the cheese plant capacity, the capacity for manufacturing dried milk, dehydrated vegetables, dehydrated meat. These products save precious shipping space, and step up the amount of food we can get to our Allies who are holding the fighting fronts.

THE BUREAU OF HOME ECONOMICS

Department of Agriculture services extend also to informing homemakers—the quartermasters of the home front—on what they should serve their families in order to fit the war-time necessities of the nation. Also, of course, through the work of the Bureau of Home Economics, and the Extension Service, informing homemakers on how to prepare the foods. In addition, a great variety of war-time information on home preserving of home grown foods, on conservation of household equipment made of scarce materials, in fact on a thousand and one matters of war-time household management. In these lines of work we co-operate closely with the Office of Defense Health and Welfare Service, the Office of Price Administration, and the Office of Civilian Defense.

SUGGESTED TEACHING PROGRAM

In closing, I want to offer a few suggestions for teaching programs in the different departments of your schools and colleges which it seems to me will speed the progress of the war program.

To the social scientists I offer the proposition that it will be extremely worth while to give the boys and girls of today a clear understanding of how a democracy wages war on the food front. I urge that you place before them the facts about how the farm people have organized themselves for collective action; and how they draw upon the government services to agriculture for help in doing their production duty.

The whole story of farmer self-discipline and intelligent use, farm by farm, of the complicated array of services is one of the best proofs that can be advanced of the ability of a democracy to do an efficient job of production while retaining individual decision and initiative. The farm record gives the lie to the Axis sneers at the efficiency of democracy. The facts about it should be taught to the pupils in the social science classes as one means of deepening and broadening their faith in the American way.

To the vocational and other agricultural teachers here represented it is not necessary to give a catalog of the jobs ahead. For in your own states and localities you know them much more intimately than I. Place by place there will be coming along this winter a succession of campaigns for farmer action on various fronts. In some places it will be the urge to feed wheat in order to step up livestock production to the limit. Everywhere, the call will be for help in machinery repair campaigns so as to keep every last workable machine in working order to replace dwindling manpower. There are going to be literally scores of special campaigns—expansion of hemp acreage in some Mississippi Valley states to replace the Manila rope no longer available to the navy; winter legumes in the southeast to get nitrogen from the air; Victory gardens everywhere; long-staple cotton for parachute rigging; and so on and on. In all of these special situations I know we can continue to count on hard and effective work by agriculture teachers and I want to express my gratitude for your co-operation with the USDA War Boards.

The home economics teachers too have a large and important war-time assignment. Though our total food output is the largest on record, the need for our food to supply our fighting men abroad and at home, and our Allies is record-breaking also. The civilian population at home must govern its eating by the need of those at the fronts. That means that we won't have everything we have been accustomed to. No other group can do more than the home economics teachers of the country to help American households adjust meals to war. You can bring about the substitution of plentiful cheese and dry beans and poultry for the beef and pork that we must remove from civilian consumption so it may go to soldiers and sailors and British and Russians.

Teaching the Social Studies in Wartime*

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The purpose of this paper is that it be representative of the work of the junior and senior high schools in Dallas, Texas, in teaching the social studies. The courses offered are:

First Year

- Early European History, 1 unit
- Community Civics, Social Science 1, $\frac{1}{2}$ unit
- Vocational Civics, Social Science 2, $\frac{1}{2}$ unit

Second Year

- Modern European History, 1 unit
- World History, 1 unit

Third Year

- American History, 1 unit

Fourth Year

- English History, $\frac{1}{2}$ unit
- Latin-American History, $\frac{1}{2}$ unit
- Texas History, $\frac{1}{2}$ unit
- Advanced Civics, $\frac{1}{2}$ unit
- Economics, $\frac{1}{2}$ unit

SOCIAL STUDIES REQUIRED OF ALL PUPILS

All pupils are required to take American History or Civics and Economics. These subjects must follow the course in World History or the two courses, Early European History and Modern European History. College preparatory pupils or pupils taking Latin should elect Early European History in the first year, Modern History in the second year, as a prerequisite for American History in the third year. Pupils who elect Early European History must follow it with Modern European History. Other pupils may take Community and Vocational Civics in the first year, World History in the second year, and American History or Civics and Economics in the third or fourth year. Credit is not given for both World History and Early and Modern European History. A state law requires all candidates for graduation to pass an examination on the Federal and state constitutions. This constitutions test is given in both American History and Civics.¹

Of far more importance than the mere frame work of courses however is, of course, the spirit of the teachers' aims. It may be true that Dallas has adhered too closely to the traditional pattern both in courses of study and, with some teachers, in the spirit of teaching these courses. The acquisition of factual knowledge only is such an inadequate process; nothing shows up such inadequacy so much as the demands of life in wartimes. The

*Read at the annual NEA Convention, Denver, Colorado, before a Joint Meeting of the National Council for the Social Studies and the National Association of Secondary-School Principals, June 30, 1942.

¹Board of Education, *The Program of the Social Studies*, Dallas, Texas: the Board. 1938.

work of the Dallas schools this past term, and the plans which are being made for the future will be discussed in this paper.

EPC MATERIALS USED

You are familiar with work of the Educational Policies Commission. In 1940 it published *Learning the Ways of Democracy*, a case book in Civic Education. In January, 1942, it added to this work by the publication of *A War Policy for American Schools*. The latter work adds the emphasis of war-time needs. These two publications may be taken as a guide in planning the social studies courses and the pupil attitudes which should be the purpose of these courses. To review briefly the policies these publications set forth: (1) the American democracy requires citizens who in their formative years have acquired a common body of facts, understandings, loyalties, and skills; (2) we must teach the *responsibilities* as well as the privileges of democracy; (3) democracy must not be defined in terms of political institutions only—economic problems and social welfare must not be divorced from political institutions; (4) the worth of the individual and the civil liberties of the individual must be stressed; (5) teachers are needed who are thinkers about democracy as a way of life, and who recognize social and economic problems.² Then to add to these—what are the priorities in schools today in the midst of war?: (6) again, maintaining intelligent loyalty to American democracy; (7) protecting the ideals of democracy against war hazards; (8) sustaining the morale of children and of adults; (9) and, teaching the *issues, aims, and progress of the war and peace*.³ No longer must it be taken for granted that these attitudes will be developed as a by-product; to teach only factual history in the hope that such attitudes will be arrived at naturally by pupils is a fallacy which no teacher will any longer pursue. To train pupils for a cultured, aristocratic way of life is evasion in its extreme; teachers who feel that such is the sole purpose of the social studies have refused to face the realities of the American schools and have failed in their thinking to keep pace with the true purpose of the American schools which, in the end, is *the social betterment of all*, regardless of the distribution of wealth, so-called social classes, diversity of races, and of religions. If these ideals seem nebulous, they need not remain so. It is the task of the social studies teacher to rearrange his courses and to insert into his program *concrete examples and applications* of the American way of life. To keep quoting "the American way of life"—with no practical interpretation, is the height of folly, and will cause the school systems to be sterile, complacent, and unprepared.

²Educational Policies Commission, *Learning the Ways of Democracy*, Washington, D.C.: the Commission, 1940, 486 pp. \$1.00.

³Educational Policies Commission, *A War Policy for American Schools*, Washington, D.C.: the Commission, 1942, 48 pp. 10c.

DALLAS REVITALIZES ITS SOCIAL STUDIES PROGRAM

In an attempt to revitalize their teaching and to improve local conditions the social studies teachers of Dallas in October 1941, planned and presented a two weeks unit of work: *Americans All*.¹ This work was supervised by W. T. White, Assistant Superintendent in charge of high schools. This unit had as its aim definite instruction in the following:

A. Civil Liberties: rights, responsibilities, dangers and ways of continuing; B. Economic Opportunities: discussion of fundamentals of character which employers require, opportunities for jobs, types of training for jobs; C. Improving American Housing: poor housing, housing projects in Dallas, help of the Federal government in housing, and city planning; D. Influencing "Americans All" or Propaganda: definition of, agencies, and results of its use. Each part contained the outline, activities, special problems, and readings. The same test to determine pupil attitudes was given before and after the unit was studied. This was done to determine whether these attitudes had changed. Local problems and conditions were stressed—particularly racial and religious ones.

In March and April 1942 another two weeks unit was presented: *What the War Means to Us*.² A great many schools in the country used this bulletin and there is no point in explaining its contents here. The regular courses of study were dropped for these two units, and every social studies class in the junior and senior high schools discussed the issues involved. Of what value were these incorporations?

TEACHERS' REACTION SECURED

Questions Asked

In May 1942 a questionnaire³ was sent to the eighty-eight social studies teachers. Of the twelve questions asked, two pertained directly to these units: "(1) What definite values, if any, did your pupils gain from the units, *Americans All* and *What the War Means to Us*; (2) Would you advise that all of our social studies courses have more of this type of material? Give reasons for your answer." From *Americans All* pupils realized these values: (1) tolerance towards races, towards minority groups, towards religious differences; (2) appreciation of the contributions made by all racial strains in evolving a typical American; (3) need for better housing; (4) need for equal opportunities (4) the uses of propaganda; (6) differences in good and bad propaganda; (7)

¹Board of Education, *Americans All*, Dallas, Texas: the Board. Nov. 1941.

Roberts, Myrtle, Teacher of History in Woodrow Wilson High School, Dallas, Texas, Chairman of Unit, *Americans All*, holder of scholarship from *National Conference of Christians and Jews* in the summer term of 1941 in the *Colorado State Teachers College of Education at Greeley*.

²Studebaker, John W. and others, *What the War Means to Us*, Washington, D. C.: U. S. Office of Education, March, 1942.

³Board of Education, *Questionnaire on Teaching the Social Studies in Wartime*, Dallas, Texas: the Board, May, 1942.

the civil liberties of the individual; (8) better use of the library facilities; (9) reading of newspapers and current articles; (10) pupils taught their parents; (11) an increased pupil interest in the classroom; and to sum up (12) a feeling from the teachers that pupils acquired an *American Consciousness*.

If this be true then the Dallas schools have succeeded somewhat in their objective of revitalizing their social studies courses. Perhaps not only active pupil *curiosity* in social values has been aroused, but also active teacher realization that formal textbook teaching no longer will meet the situation and demands of the American schools. The common complaint from teachers was lack of material for this unit. Perhaps this fault lies with the teacher. Surely he could do a little "rustling around" and could acquire and help the librarian acquire current material to meet the demand. And surely he could draw on pupil knowledge of social conditions, on pupils home environments, on field trips—to satisfy this criticism of his lack of material. Otherwise the criticism could be directed at the teacher—namely—that it is he who is in a rut, that he not truly lives—but has withdrawn into a monastic cell! At least the majority of the Dallas teachers have acquired some doubts as to the value of following the *traditional* both in content and in attitudes to be arrived at in the social studies.

Teacher reaction to *What the War Means to Us* was more enthusiastic. Their evaluation of the unit brought out the following: (1) pupil awareness of the background of the war, the issues of the war and of the peace to follow; (2) differences in American democracy and the national policies of the Axis powers; (3) the need for an "all out" production and with it the need for conscious national unity and sacrifice; (4) the danger to American democracy if the war were lost by us; (5) desire for an adequate knowledge of geography in terms of economic interdependence and of changes in distances due to air power; (6) the dangers of a policy of isolation which policy results in unpreparedness; (7) the need for Western Hemisphere solidarity; (8) and the folly of an imperialism based on the feeling that the American is superior to all other races. The values realized from these two units bear a close resemblance to those which the Educational Policies Commission set forth in their two publications. The newspapers of Dallas gave favorable comment on the work of the schools on *Americans All*. One of the papers runs a department called *Facts and Features*; during the use of *What the War Means to Us* this department co-operated by including items based on that unit.

Viewpoints of the Teachers

The purpose of the questionnaire was primarily to ascertain from the teachers their re-orientation in teaching the social studies in wartime. Question one was: "What is your *first* objective in teaching the social studies in wartime?" Question two: "Does this differ from the first objective in peacetimes?"

If so, how?" Question three: "What ideals and events do you emphasize now that possibly you did not emphasize before Pearl Harbor?" The objectives from these three may be discussed as a whole. There was a clear realization as shown by the answers that teaching a factual history by a chronological development does not mean that pupils develop a true patriotism, that teaching in a traditional way does not mean that pupils all become true Americans. The feeling was that teachers must make a conscious effort to indoctrinate children in the meaning of true American democracy. This is a favorable reaction since then it will not be taken for granted that an American consciousness will be developed as a by-product.

Going hand in hand with this was the knowledge that citizens have responsibilities as well as privileges. Too long have we taken it for granted that we are naturally endowed with certain rights and privileges. This may come from our use of Locke's theory of "Natural rights" and the influence of the French philosophers on our Declaration of Independence and on our Constitution. Teachers must from now on show their pupils that although natural rights are the ideal, that after all, if mankind is born in a country which in philosophy endows him with natural rights, this theory is still on paper to a great extent. To teach that American citizens have these rights by nature, develops a complacency. Our citizens must know that it is the duty of each generation to save and to enlarge its natural rights. And if a citizen acquires these rights and enjoys the blessings which they create, he has a duty towards his government—that active participation in the social thought and in the political processes of government are demanded from him. This is one of the points which the Educational Policies Commission underlines most heavily. The falseness of isolation as a national policy was recognized in the answers: isolation leads to a static condition in preparedness in army, navy, and aircraft; it leads to chaos in economic exchange with other nations; it ill prepares a country to make definite contributions to world peace.

Questions four and five were: "How much discussion of the problems of everyday life (such as: rationing, hoarding, transportation difficulties) *can be* and *should be* included in your history teaching?" "Do you consider it important that these everyday problems be included?" Out of eighty-eight answers, three teachers replied a flat *no* to the questions. The other eighty-five answered that much time should be given to these problems. The amount of time given to discussion varied. Some teachers made such discussions a definite part of each day's class period; some used incidental discussion; and some set aside one period each week. Herein lies these weaknesses: that teachers in their superior understanding may assume too much that incidental discussion is enough; or they may divorce these vital problems of living from reality if they set aside one day for them, and eliminate them on all other periods.

As you know, the assumption among social science teachers is growing that problems of social and economic welfare must be understood by pupils in the secondary schools for these problems relate to them. It is not assumed that the pupils will necessarily be confronted by the same type of problems when they reach adulthood—but that this awakened awareness of these ever present problems will constitute a basis on which to build new solutions. In other words the adult of tomorrow should not be so surprised that life frequently springs new puzzles at him. The most astonishing effect of teaching such material was noticed in the carrying over into the home. The Dallas teachers saw that intelligent discussion at school would carry over into the homes of the pupils. This constitutes an indirect adult education. Also, the improvement in the morale of the pupils and their parents should be stressed. Ignorance breeds fear and a feeling of insecurity; intelligent explanation will cast out these fears; and the feeling of individual insecurity will give way to national unity and wholehearted co-operation. It has been said that "Morale is making your feet do that which your mind says is impossible"—or—in other words, the nation stiffens its backbone! An encouraging trend as compiled from the answers was the demand of the teachers for courses in *American Problems*. This may point the way to a reorganization of courses.

America has not lost its optimism. All teachers agreed in answering *yes* to the question: "Is it possible to teach children how to accept military defeats without teaching defeatism?" The suggestions given were: that comparisons be made with other wars of the dangers of self-complacency and of the need for sacrifices if the war be won. No teacher will let his pupils sink into the pit of despondency of "What is the use?" America must remember that discriminations against racial and religious groups sow a fertile field for a psychology of general defeatism among those groups discriminated against.

Question seven asked: "If you teach geography, what do you now emphasize that you did not emphasize before?" The question should have been stated differently—i.e.: "In both history and geography courses what do you now emphasize?" However, most history teachers answered the question. Some few did not because on its surface the question appeared to be directed at none but geography teachers. The consensus of opinion was that history cannot be taught without geography.

Political geography has given way to *economic* and *place* geography. Again we see here the emphasis on the economic interdependence of nations. We see the effect of airpower on isolation and on the theaters of war. The Far East, the Pacific, the Caribbean, Australia, the Latin-American countries must now be of common knowledge to all pupils. Particular emphasis must be laid in the future on rapid transportation and that *distance* is no longer *distance*!

Question nine asked: "How do you handle controversial subjects such as: hours of work, wages, government regulation of business, taxation?" This question goes hand in hand with that on "how much of the problems of everyday life should be included in your history teaching?" Most teachers answered that they tried to see that both sides were presented: by volunteer pupil discussion, or by planned debates, or by assigned readings. Few teachers indicated that they permitted any definite conclusions to be made. Some said that an attempt was made to sum up what was best for the nation. One answered "base conclusions on humanitarian principles." Perhaps this is the best answer, but whether it is or not depends on the teacher. If he is one who is a thinker about democracy as a way of life and if he recognizes social and economic problems⁷ we may trust that his conclusions will be based on humanitarian principles! This points to the great need for teachers who still learn and who are fully conscious of the stream of life around them.

PROPOSED REORGANIZATION

The Dallas public schools are at least thinking about their problems. This past year's work and the fact that the nation and the entire world is at war either actively or passively make it imperative that the social studies program be changed. Some reorganization work is being planned by the assistant superintendent in charge of high schools. We quote from a letter:

1. Our social studies course should be an integrated three- or four-year course beginning with the ninth grade. It should be required of everyone.
2. It should have as a core continuous World History—not United States History, Latin-American History, English History, or some other kind of history—but World History with emphasis on the opportunities, responsibilities, and difficulties facing the United States.
3. We should come to recognize the place, importance, and potential power of such heretofore weak countries as India and China. We are rapidly placing within their hands the implements of a mechanical civilization, and when they become proficient in the use of those implements and have attained a high plane of living for their people, unless we have developed friendliness and understanding with them, they can easily subjugate us.
4. We should understand the economic interdependence of the whole world, and the tremendous importance of communications and transportation.
5. We should have a better knowledge of geography. Places and locations must be real. This section, along with 4 above, forms one aim.
6. We should develop religious and racial tolerance and understanding.
7. The possibility of post-war world peace should be based on
 - a. A responsible use of power by the United States and associate nations.
 - b. An assumption of responsibilities commensurate with our potential strength.
 - c. A friendliness with other peoples, both weak and strong.
8. We should indoctrinate for democracy and Americanism in so far as our own government and way of life are concerned.

⁷Educational Policies Commission, *Learning the Ways of Democracy*. op. cit.

Physical Fitness in Secondary Schools

N. P. NEILSON

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Physical Fitness—In Preparation for the Armed Forces and War-time Service is the title of a Manual for use in secondary schools which has been prepared by a Committee appointed by the United States Commissioner of Education in collaboration with the U. S. Army, the U. S. Navy, and the U. S. Public Health Service. On the Committee, Lt. Col. Theodore P. Bank represented the U. S. Army; Commander Lyman S. Perry represented the U. S. Navy; James E. Pixlee represented the Army Air Forces; Mayhew Derryberry, Ruth E. Grout, and Franz Schuck, M.D. represented the U. S. Public Health Service; Jackson R. Sharman, Dorothy LaSalle, and Bernice Mallory represented the U. S. Office of Education; and Ruth Evans, Springfield, Massachusetts; Wynn Fredericks, Harrisburg, Pennsylvania; Ellwood A. Geiges, Philadelphia, Pennsylvania; Joe Hall, Tallahassee, Florida; Martha Hall, New York University; Strong Hinman, Topeka, Kansas; N. P. Neilson, Washington, D. C.; A. H. Pritzlaff, Chicago, Illinois; Floyd Rowe, Cleveland, Ohio; and Mazie V. Scanlan, Atlantic City, New Jersey, represented the profession in the field. Jackson R. Sharman, Principal Specialist in Physical Fitness, U. S. Office of Education, served as chairman of the Committee. The bulletin is now being printed and will be available soon for distribution by the Superintendent of Documents, Washington, D. C.

PHYSICAL FITNESS FOR SECONDARY-SCHOOL PUPILS

The Manual presents a war-time program of physical education with the emphasis placed on instruction and practice in aquatics, gymnastics, combatives, sports and games, and other vigorous activities adapted in intensity and duration to the individual needs of pupils. One regular school period daily of instruction in physical education for all pupils is recommended. The instructional period should be supplemented by an elaborate participation program including intramural and interscholastic athletics. It is recommended that all normal pupils participate in competitive athletics, mass athletics, road work, hikes, week-end journeys, and similar events for at least ten hours each week in addition to the physical education period that is included in the school schedule. In its minimum essentials it calls for but two changes in the usual secondary-school program. The first is an increase in teaching time allotted to instruction in physical education, and the second is an increase in the intensity of the exercises.

The purpose of the program outlined is to make secondary-school pupils physically fit to carry their responsibilities as members of the armed forces and as efficient and effective workers in the war effort. This includes the development of strength, endurance, stamina, and physical skills that will be of direct

value and use in the armed forces and war work, and an attitude and viewpoint that will cause the pupils to support wholeheartedly the war effort.

Large numbers of pupils now enrolled in the secondary schools will enter into active service in the armed forces and war-time industry in the immediate future. In addition to the boys who will be called to some form of service, it has been estimated that by the end of 1943, 6,000,000 women will be employed in war production, many of whom will be drawn from the secondary-school age group. These youth must not only be fit from the standpoint of technical skill and morale, but also be physically fit.

Army and navy officers have stated that the young men inducted into military service whose physical examinations reveal no serious physical defects, lack development, strength, and endurance to such a degree that the program of military training is retarded for several months while the recruits are being built up physically.

There are several things that affect, favorably or adversely, the development and maintenance of a desirable level of physical fitness. Participating regularly in a rational program of physical education has been demonstrated to be one of the most important elements that contribute to physical fitness. Other significant factors are physical defects, communicable disease, accidents, nutrition, environment, and personal health habits.

RESPONSIBILITY

The success of a physical fitness program in the secondary schools will depend largely on adjustments in the school program that must be made by school administrators. It is necessary that there be provided the minimum essentials of (1) adequate time in the daily schedule, (2) a competent teacher, and (3) a place for conducting the classes. The state department of education, the local superintendent of schools, and the principal of each high school have functions that must be performed if the program is to be well conducted.

Each teacher can and should use initiative in developing and using plans for his own particular situation. He has specific responsibilities for selecting the activities to be included in the program, arranging for the time schedule, organizing the class and class period, developing a suitable testing program, planning the intramural and interscholastic programs, and planning for co-operation with other agencies.

SELECTION OF PUPILS FOR PARTICIPATION

A careful selection of pupils is needed before the training starts. It is necessary to differentiate between (1) the healthy pupils who are able to take the full program, and (2) those who are not quite healthy and, therefore, not able to take the program in its original form. Physical education in the armed forces has a basic safety factor which is absent in many schools. In the army and the navy the men have been found to be healthy by a thorough medical examination and they have convenient opportunities for medical consultation.

In many schools, the pupils have neither one nor the other and hence in such schools vigorous training needs to be supervised closely.

The selection of pupils by teachers for participation in physical education should be based on three things: (1) case history, (2) physical inspection, and (3) careful observation during the first weeks of training. The health history of each pupil dealing with illness and with his physical and mental development furnishes most of the data that the teacher needs for his selection. The physical inspection and observation during training may help to find the status of the pupil so that the training may be adapted to his needs.

ACTIVITIES FOR BOYS

Our armed forces are operating under conditions that demand an ability on the part of the individual to handle himself successfully in the water while fully clothed. Hence, secondary-school pupils should learn to stay afloat for a long period of time, to swim under water, and to swim long distances without exhaustion.

Gymnastic exercises may be used to improve muscle tone and bodily development. Marching and running, road work, cross-country and obstacle running, relays, stunts, conditioning exercises, apparatus activities, tumbling and combative activities should be included in the program. The sports and games recommended are: group games, track and field, skating, camping, cycling, basketball, field hockey, football, six-men football, touch football, soccer, speedball, and volleyball.

ACTIVITIES FOR GIRLS

Physical fitness is as important for girls and women as for boys and men. Girls must be prepared to carry on work which is directly related to the winning of the war, even though not on the fighting front. Many women are now at work in defense industry and farming, serving as nurses, medical social workers and recreation leaders with the American Red Cross, with the USO, and other organizations. The educational program for girls must be changed to meet these needs.

Women in the American Red Cross and in other branches of the service which may be sent overseas must be completely at home in the sea while fully clothed. They must be able to stay afloat for a long period of time and be ready to give assistance to others when necessary. These needs, therefore, should be emphasized at the present time rather than recreative aspects of swimming. The most valuable strokes in emergency situations are the side, breast, back, and trudgeon strokes.

The great value of gymnastics for girls is that the movements can be used to develop specific parts of the body. The duration and intensity of the dosage can be controlled. The objectives are to develop strength and endurance, skill and agility, and assist in the maintenance of erect carriage. Running, obstacle races, relays, stunts, conditioning exercises, and apparatus activities may serve as developmental activities for girls.

Acquiring skill in any activity is dependent largely upon timing and upon judging space relationships. As skill improves, harder and longer periods of work can be sustained if a rhythm of work is established. Rhythmics are unique in contributing this particular training to war-time efficiency. They also are effective in developing endurance and strength.

Sports and games provide for strenuous big muscle activity and contribute to the development of speed and endurance. They afford a wide opportunity for the practice of desirable character traits. With these ideas in mind, fundamental game skills, lead-up games, field ball, soccer, speedball, field hockey, basketball, volleyball, hiking, camping, skating, bicycling, horseback riding, and skeet shooting should be included in the physical education program for girls.

TESTS AND STANDARDS

Achievement standards taken from the best available sources are presented in the Manual. In the program of training for physical fitness, teachers should stress the daily performance of special activities with ever increasing frequency and duration of participation. As this procedure is followed, improvement in ability will be rapid and new standards will evolve. For the present, pupils able to secure "superior" ratings in any test items should be encouraged to spend more time in the items of the program in which their ratings are below the level of "superior."

To conserve time in testing, detailed standards are given for eighteen tests for boys from which the instructor should choose ten tests as a battery. The tests have been grouped into three categories according to the general muscle groups primarily tested; namely, (1) arm and shoulder girdle, (2) abdomen and back, and (3) legs. It is recommended that in any battery of ten tests that no less than three tests be chosen from each category and that the first test listed in each category be included. The tests recommended are: Category I (Arm and Shoulder Girdle)—Push-ups, pull-ups, dips on parallel bars, 15-foot rope climb, and bar vault; Category II (Abdomen and Back)—sit-ups, hanging half-lever, leg lift, forward bend, and bank twist; Category III (Legs)—Potato race, jump and reach, standing broad jump, running broad jump, running high jump, 100-yard dash, 440-yard run, and 880-yard run.

Boys in the secondary school differ greatly in age, height, and weight. These factors tend to favor or handicap them in athletic performance. To classify boys according to only one factor is unfair, hence a classification plan based on age, height, and weight is used. Standards for each test to be met for ratings of superior, excellent, good, fair, and poor are given in a table.

There is a scarcity of authentic data on tests for secondary-school girls. Descriptions of the tests and the standards for jump and reach, potato race, soccer throw-in, swimming twenty yards and swimming 40 yards are included for girls.

A War-time Program* in Mathematics and Physics

In the transition from peace to a war-time basis the schools, like all other agencies and institutions of society, must of necessity make certain adjustments to meet the immediate and pressing needs of a nation being rededicated to the maintenance of its way of life. In our democratic plan of governmental responsibility, education is a function of the several states. The chief school officials of the states, therefore, have a clear-cut responsibility in effecting the transition necessary to meet national needs in time of war.

In recognition of this situation, the National Council of Chief State School Officers held a planning conference at Nashville, Tennessee, on May 10-14, 1942, in co-operation with the Federal Commissioner of Education and with representatives designated by the Secretary of War and the Secretary of the Navy. The conference was attended by officials from twenty-six states, comprising state superintendents, commissioners of education, or their designated representatives. The meeting was called by the president of the council at the request of the navy department and because all of the forty-two members who replied to a questionnaire requested such action. In as much as major emphasis was placed by army and navy representatives upon deficiencies in physical science and mathematics, discussion was centered about these two fields.

EMERGENCY COURSE IN ESSENTIAL MATHEMATICS

The general purpose of an emergency course in essential mathematics is to provide, in the last year or two of the secondary-school, instruction and training that will be of the widest possible usefulness during this emergency. It is the judgment of experienced industrial and military training authorities that specialized and technical training can be done best in schools and classes organized for that purpose. An emergency course in essential mathematics, therefore, should provide the foundations upon which later specialized military and industrial training may rest. It should be understood that any emergency course in essential mathematics is not designed to replace the regular sequential offerings in mathematics. Rather it seeks to meet an emergency need for:

- (a) Junior or senior pupils who for one reason or another may not have taken any basic mathematics courses in the secondary school; or
- (b) Pupils (and out-of-school youth) who may have taken one or

*Excerpts from a report of the planning conference, in pamphlet (31 pp.) form, entitled *A War-time Program in Mathematics and Physics*, held by The National Council of Chief State School Officers with Representatives of The War Department, The Navy Department, and the United States Office of Education, Nashville, Tennessee, May 10-14, 1942. This complete report was issued to members of the National Council of Chief State School Officers by Colin English, Council President. Copies may be secured at 15 cents each postpaid for less than 50, or at 10 cents each, express collect, for 50 or more, from the State Department of Education, attention of Paul Eddy, Editor of Publications, Tallahassee, Florida.

more basic mathematics courses in the secondary school but need an intensive review for the purpose of refreshing their mathematical knowledge and skills with special emphasis upon the applications thereof.

TOPICAL OUTLINE OF THE PROPOSED COURSE

Arithmetic

Fundamental operations (whole numbers, common and decimal fractions), percentage, ratio and proportion, and mensuration (use and conversion of units of measurement; areas and volumes).

Geometry

Geometric forms (concepts of plane and solid geometry); basic facts (angles, triangles, quadrilaterals, polygons, circles—their concepts, mensuration; Pythagorean theorem); direct measurement including instruments (vernier, micrometer, steel tape, etc.), techniques, and degrees of accuracy; and construction (ruler, compass, protractor, graph paper, scale drawing).

Algebra

Relationships between arithmetic and algebraic operations, fundamental operations (literal numbers, signed numbers, grouping like terms, factoring, exponents), equations and formulas (equations—formulation and solution; formulas—substitution in and application of), and graphs (construction, use, and interpretation—line, bar, circle; rectangular co-ordinates).

Trigonometry

Similarity, indirect measurement, trigonometric ratios, functions of the right triangle and their uses, and use of table, including logarithms.

In the course outlined above, the approximate percentages of time to be devoted to different phases of mathematics are suggested as follows: Arithmetic, 40%; Geometry, 20%; Algebra, 30%; Trigonometry, 10%.

The scope of the foregoing outline of content provides for a two-semester course. Adaptations should be made in the light of individual needs of the pupils enrolled. In the development of this course it is recommended that major emphasis be placed upon industrial and military applications. Thoroughness and mastery should be major objectives rather than determination to have each pupil complete a pre-determined schedule of assignments.

A FOUR-YEAR PLAN IN MATHEMATICS

The general framework for a sound mathematics program already exists in most secondary schools. The selection of items for emphasis within this framework should be a continuing responsibility of teachers and school officers. The shift in the demand for workers with varied types of mathematical training should be the guide in the selection of items to be emphasized.

The war has introduced new demands, and emphases must change accordingly.

In schools in which a four-year sequence in mathematics is offered and in which consideration is given to maximum development of all pupils in terms of individual differences, little difficulty should be experienced in adjusting to military requirements by those pupils who complete the entire program. In schools with a more limited program, an analysis of army, navy, and industrial activities involving the use of mathematics should direct selection of points of emphasis.

The problem of adaptation to individual and group needs is one which must be solved by each local school. The points of emphasis may fall within the organized courses in arithmetic, algebra, geometry, and trigonometry which are taught as such. They may be combined in the so-called fusion or general mathematics courses which cut across the usual pattern of organized courses, or courses may be built around projects which entirely disregard previous patterns of procedure.

Constantly changing military and industrial requirements may dictate new areas of emphasis from year to year. The outline which follows lists areas of emphasis that are indicated by an analysis of present needs. Every school should provide opportunity for maximum growth, in terms of the ability of the individual student, in understandings, skills, and appreciations.

A comparatively small number of pupils take the complete four-year sequence in mathematics now offered in most secondary schools. It may be wise, therefore, to reorganize content and procedure in order that mathematics may contribute more directly in meeting the present emergency. State departments and local school officers should give careful consideration to sequences of two, three, and four years.

Administrators should give full consideration to each of the following pertinent factors in determining the number of years of sequence in mathematics instruction that will be offered by any school:

1. New demands for proficiency in mathematics
2. Evidence of interest and ability revealed through diagnostic procedures
3. The number of pupils
4. The teaching staff and instructional facilities
5. Balance between required and elective subjects

In schools which offer more than one sequential arrangements of mathematics courses the pupils should be expected to take a complete sequence and discouraged from making indiscriminate selections from the courses offered. Teaching procedures should be improved by introducing more illustrative materials chosen from war-service areas in which the secondary school graduates are most likely to serve.

The school, through its guidance program, should give added attention to the mathematical needs of the pupils by:

1. Establishing a diagnostic testing program in arithmetic computation at the time of registration in the secondary school and at appropriate intervals throughout the course.
2. Establishing a diagnostic and remedial program as an integral part of the mathematics course for all pupils enrolled in mathematics.
3. Encouraging pupils with appropriate purpose and adequate ability to pursue more technical phases of mathematics.
4. Replacing indiscriminate assignment of pupils to mathematics courses by an effective guidance program.

A program of maintenance of simple arithmetic skills should be established for those who have not enrolled in a regular mathematics course.

POINTS OF EMPHASIS

New demands necessitate changed emphases in the mathematics program. A satisfactory sequence for average and large secondary schools should involve three or four units of work. Schools unable to offer more than two units of mathematics should offer the emergency course as the second unit, preferably in the junior or senior year. The following topics should be emphasized in the three- and four-year sequences:

1. ARITHMETIC SKILLS

Fundamental operations; common fractions; decimal fractions; percentage; ratio and proportion; computing areas and volumes; simple graphical representation; mensuration and conversion of units (including the metric system); simple formulas; simple equation; substitution in formulas; facility in reading mathematics statements and data; analysis of problems and problematic situations.

2. ALGEBRA

Relationship between arithmetic and algebraic operations; signed numbers; fundamental operations; literal numbers and fractions; simple factoring; simple equation; simultaneous equations; exponents and understanding of their use in logarithms; graphic representation; rectangular co-ordinates; solution of equations by the graph; conversion of verbal problems into formulas.

3. GEOMETRY

Skill and accuracy in construction; definitions and properties of geometric figures; mensuration; functionality—relationships; scale drawing; use of instruments; indirect measurement; numerical trigonometry; more emphasis on practical problems and field work than on extensive formal proof. Since time is now a major factor in everything, careful consideration should be given to the place of solid geometry in the mathematics program. The essential elements may be included in the courses in arithmetic, plane geometry, and trigonometry.

4. TRIGONOMETRY

Functions of plane and spherical triangles with emphasis on the right triangle; use of tables, including logarithms; use of slide rule; interpolation; mensuration; similarity;

trigonometric ratios; indirect measurement; many illustrative problems from military and naval services and from industry.

EMERGENCY COURSE IN PHYSICS

Since the teaching of physics does not constitute an emergency in schools that have experienced instructors and suitable laboratory equipment, the council has designed an emergency course for schools which are handicapped in either or both of these respects. In most schools a link is missing between theory and practice, between manipulative skills and concepts of principles. Neither is practical without the other. There is real opportunity now for the physics laboratory to fill this gap in the chain of secondary-school experiences and in so doing occupy a strategic place in the nation's war effort.

The simplest way to make quite certain that science principles will be recognized and utilized by pupils in later experiences is to provide the same or similar experiences as part of the course, and to discuss and read about related fields of application. This implies, then, that if we are preparing future pilots, mechanics, radio technicians, machinists, and engineers for service in the armed forces and in industry, we must use machines, tools, and instruments in our laboratory that are important in these areas. Also, we must follow typical procedures and introduce trade language where feasible.

It should be clearly understood that this emergency plan for teaching physics calls for instruction in science and not in industrial arts. This does not preclude work experience and the making of very practical applications of science principles. The inclusion of these factors should serve to revitalize this important course which has been growing more and more unpopular at a time when its need is important to national welfare.

In addition to such traditional laboratory equipment as may be available, the course calls for an old gasoline engine, a simple radio receiver, an aircraft model, and an assortment of shop tools. Fortunately, worn-out machines and extra tools are available almost everywhere at little or no expense, and public spirited citizens welcome an opportunity to assist in equipping a school in such a practical manner.

In as much as no secondary-school textbooks have been issued for this particular type of course, physics teachers will find it profitable to prepare special units that have war-time significance and are supplementary to material in their adopted texts. Possibly the most important of these units will be constructed around the airplane with particular emphasis on theory of flight and meteorology. Navigation should also be included unless this topic is covered in parallel mathematics classes. Excellent reference material is available from the Civil Aeronautics Administration, Department of Commerce, Washington, D. C.

The navy and the signal corps of the army are particularly interested in the development of units of instruction in the simple telephone circuit.

Virtually all branches of the service desire boys to have some clear concepts of the principles involved in radio and simple radio circuits. Photography is also of unusual significance at this time. Perhaps more boys will profit from the clear understanding of the principles of mechanics applied to tools than to any one of the foregoing topics. Use of these and other units should depend upon the particular needs of the group and of the individual pupils.

It will not be necessary to develop a unit around the gasoline engine because, if these recommendations are followed, the laboratory equipment will include a complete engine which has been torn down for use as practical applications arise throughout the entire course. It is suggested that the units on aeronautics be introduced immediately after text material has been completed in mechanics and heat. A combination of mechanics, heat, and aeronautics would ordinarily comprise a semester's course. Electricity, sound, and light with parallel units in radio, telephone, and photography would also require a semester. Whichever comes first should begin with a basic understanding of matter and energy.

A FOUR-YEAR PLAN IN SCIENCE

There now exists in most school systems throughout the nation the framework for a sound program in science. In many schools and systems an organized program of science study has been introduced on the elementary level, while general science is usually presented in the early grades of the secondary schools.

Rapid advances in this technical age and the type of warfare in which our nation is engaged add to the importance of science instruction in the schools. Thoroughgoing instruction in the sciences as a contribution to the war effort is a responsibility which must be accepted by the schools.

In schools able to offer a full complement of the sciences it is recommended that the program include regular courses in general science, biology, physics, and chemistry, usually in that order. This proposed sequence is not meant to exclude a thoroughgoing terminal course in general applied sciences.

In schools not able to provide extensive science offerings, it is believed that, to make the greatest possible contribution to the needs of a nation at war, courses in general science and physics should receive first consideration. At this time boys should be expected to take a course in physics before they enter industry or the armed forces.

In any and all courses in science offered in the secondary schools, it is obvious that emphasis should be placed on those concepts, skills, and understandings which an analysis of the needs of the armed and industrial forces has shown to be most timely. The suggestions of areas for emphasis which follow this statement are designed to point out these particular needs. It is not implied herein that science courses should necessarily carry these particular emphases after the present emergency has passed. However, it is

felt that in time of war the outlines suggested here should receive prime attention.

GENERAL SCIENCE

The only science that is a constant in most secondary schools is general science. For pupils who leave school at the end of the ninth year it is frequently the last opportunity to gain organized science information. Most of the material presented in general science courses is of extreme value both in military and civilian life. Certain modifications in emphasis and the inclusion of some additional topics should make the program still more valuable.

Physics, chemistry, and other advanced science courses are built on the foundation of general science. The great demand for more thorough training in these and related fields is another reason for strengthening the general science program. After a study of the recommendations of military authorities and a careful consideration of the problem of grade placement and distribution of topics, the following content is recommended:

Water

Sources of safe drinking water; dangers of drinking impure water; sources of water pollution; dangers of swimming in polluted water; dangers of drinking unsafe water while camping or traveling; how water is supplied to the home and community.

Disease Prevention

- a. **Causes of Disease:** Bacteria; protozoas; viruses; plant and animal parasites; non-living agents.
- b. **Transmission of Disease:** Air; food and water; contact; insects; carriers.
- c. **Control of Disease:** Factors favoring spread of diseases; diseases prevalent in war-time; prevention of food and water contamination; treatment of unsafe drinking water; control of insects that transmit diseases; protective factors in the body; group inoculation; chemicals, antiseptics, and sulpha drugs.

If pupils have not had the benefit of a good course in elementary school science, the following topics should be introduced or reviewed:

Astronomy and Health

- a. **Astronomy:** Kinds of heavenly bodies (stars, planets, asteroids, satellites, comets and meteors); the solar system; recognition of major constellations; location of brighter stars; apparent motion of planets and stars; stellar distances.
- b. **Physiology, Hygiene, and First Aid in Relation to:** The skeletal system; the muscular system; the respiratory system; the circulatory system; the digestive system; the excretory system; the nervous system.
- c. **Adjustment to Indoor Life:** Factors that increase the efficiency of the body; factors that reduce the efficiency of the body; relation of health to efficiency; occupational diseases and ailments; mental hygiene.
- d. **Adjustment to Outdoor Life:** Opportunities for outdoor recreation; hiking and camping hazards; sleeping in the open; emergencies.

The following content should also be included:

Measurement

- a. **Distance, Area, and Volume:** English units; metric units; useful tables; addition,

subtraction, multiplication, and division of simple denominate numbers; practical problems.

b. **Weight:** English, units; metric units; beam and spring balances; tables and denominate numbers; specific gravity and density; practical problems.

c. **Latitude:** Meaning of latitude; determining latitude from the North Star; determining latitude by means of the sextant.

d. **Time:** Standard time; time belts; daylight saving time; the chronometer.

e. **Longitude:** Meaning of longitude; method of determining longitude; relation of longitude to standard time.

f. **Map Making and Map Reading:** Road maps; contour maps; aerial maps; graphic and R.F. scales; rectangular co-ordinates; use of latitude and longitude in map making and map reading; use of compass; correction of compass readings; declination; azimuth and back azimuth.

Weather

a. **Weather Elements:** Wind; temperature; precipitation; clouds; humidity; pressure; weather instruments, including the thermometer and hygrometer, barometer and barograph, measuring wind and precipitation, sounding balloons, radio sonde, theodolite, adjustment and correction of weather instruments; local forecasting.

b. **Air Masses:** Source regions; movements of air masses; fronts; cyclones; summer and winter air masses.

c. **Air Movement:** Surface wind; winds aloft; air currents; effect of atmospheric pressure; general circulation of air; circulation in cyclones and anticyclones.

d. **Clouds:** Types; velocity and direction of cloud movement; ceiling and visibility; formation and dissolution of clouds.

Food for Health

a. **Human Food Requirements:** Energy requirement of the body; conditions which determine the energy requirement; the protein requirement; the water requirement; mineral salts; vitamins.

b. **Food Selection:** The balanced diet; food habits and prejudices; canned and un-canned foods; sugars and starches; fatty foods; protein-rich foods; sources of vitamins and minerals.

c. **Food Conservation:** Food preservation; waste in cookery; relative cost and food values; food substitutes; low-cost diets.

BIOLOGY

Secondary-school courses in biology offer many opportunities for the preparation of information and the acquisitions of skills which are of special importance during the present national emergency. First aid, human physiology, human anatomy, disease prevention, foods, and nutrition are examples of topics that should receive sharply increased emphasis at this time. Fortunately, since these topics are already included in most courses, it is possible to give them increased emphasis without greatly disturbing the present sequence or organization.

In general, more individual and small group laboratory work is strongly recommended in biology. At least some laboratory exercises should be definitely experimental. A few types of laboratory exercises in which controlled experimentation is feasible are:

1. The study and use of culture media.
2. The study and use of staining techniques.
3. The study and use of genetic materials.
4. Laboratory methods of making blood counts and blood typing.
5. Studies of the effects of various kinds, durations, and intensities of radiation on plant growth.
6. Studies in hydroponics.

PHYSICS

It is suggested that new emphasis be given, throughout the several main topics of the physics course, to quantitative relationships among physical quantities. It is further suggested that every effort be made to provide good non-routine, individual or small-group laboratory work, and that pupils be required to write clear-cut reports of their experiments. Suggestions concerning modification of content, by topics, follow. The order of topics is not intended to indicate a teaching sequence.

Some teachers have found that a topic order—sound, light, heat, electricity, and mechanics—is preferable to the more traditional order. Other teachers begin the course with the topic “electricity.” Concepts of matter and energy are fundamental and should probably come first in any sequence.

The suggestions here presented may be adopted, readily, in the teaching time ordinarily provided for the physics course. Some additional content is suggested. Considerable saving of time is also suggested. These suggestions should help to make the instruction in physics more effective for those pupils who may later enter any of the several branches of the military services; they should be especially helpful to the pupils who may enter one of the branches of aviation. The instruction, as here modified, should also serve well the pupils who may later enter college, or technical school, or who may obtain work in industry.

Mechanics of Fluids

Some items need little or no reteaching if a pupil has had general science. Stress simple quantitative applications.

Mechanics of Solids

Emphasize quantitative relationships and resolution of vector quantities—forces and velocities. Stress both balanced and unbalanced forces; use fundamental units; use practical, pertinent data and problem material to enhance understanding of the importance of these relationships in aviation and in ordnance.

Heat

Emphasize simple quantitative relationships. Some items need little or no reteaching if pupils have had general science. Stress thermometry and calorimetry, quantitatively. Stress the gas laws, quantitatively; apply this information, and information concerning change of state, to a serious study of air masses and of atmospheric temperatures and densities. Add some work on weather, weather instruments, weather forecasting, and meteorology as applied in aeronautics.

Sound and Light

Make clear the relationships of sound and light to energy. Stress photographic applications of light and lenses; cameras, enlarging.

Electricity

Some electricity may have been taught in earlier science courses; reteach such material only as needed. Emphasize simple quantitative relationships and problems. Include simple alternating current circuit phenomena, the telephone circuit, and introduce pupils to the principles of the radio.

CHEMISTRY

Suggestions are here presented for slight reorganization of content, for new emphasis on some of the content, and for improvement of laboratory procedures in high school chemistry. These suggestions are made after careful study of the fundamental requirements of the several branches of the military service, and of industrial work that is based on some knowledge of chemistry and of chemical procedure. The content here proposed is much the same as that ordinarily taught; the organization of this content may differ, in some respects from a traditional order of topics. These suggestions are of such nature that they can be used, readily, in secondary schools. The instruction here recommended should serve well those who enter the military services and those who may use the instruction to prepare them for entrance to college, technical school, nurse-training institution, or industry.

SUGGESTED PROCEDURES

1. Study related and similar elements in groups; use the Periodic Table to establish relationships among members of groups of elements.

A general study outline for each element may include, (1) Source; occurrence; preparation; (2) Chemical and physical properties; (3) Uses; and (4) Important compounds; their preparation and uses.

2. Re-emphasize quantitative relationships, and apply these relationships *continually* throughout the course.

3. Add to the teaching of organic chemistry the general formulas of the methane and benzene series; the compounds octane and toluene; important halogen and other derivatives of the principal members of the two series.

4. As the work of the course progresses, encourage pupil classification of chemical compounds under such headings as: non-electrolytes, and electrolytes: acids, bases, and salts.

5. Extend the study of neutralization, both classroom and laboratory to include: normal and molar solutions, simple indicators, and the determination both theoretical and experimental, of the acidity or alkalinity of various common substances.

6. Expand the study of atomic structure to include some practical understanding of: atomic weights and atomic numbers, isotopes, the nucleus, the periodic arrangement of the elements, the extra-nuclear structure, and radio-activity.

Pre-Aviation Training in Secondary Schools*

The tremendous importance of aircraft in modern warfare admits of no doubt or controversy. Control of the air has been of demonstrated advantage to the winner in every major operation both at sea and on land in the present war. Taking a lesson from the tragic happenings in Europe, the United States during the summer of 1940 set about building up its air strength. With military planes of all kinds coming off assembly lines in American factories we are now bringing about that superiority in air equipment which will be a principal factor in winning the war. Equipment alone will, however, not achieve success.

The army and navy need candidates for air-cadet training to keep pace with the accelerating production of planes. To fill an estimated quota for the current year of 100,000 air-cadet trainees needed in addition to those who already are candidates, the army and navy are turning to the physically qualified youth in this year's high-school graduating class and those who were enrolled in secondary school in recent years.

The need at present is especially for air pilots in the navy, and for pilots, bombardiers, and navigators in the army—the flying personnel. Whenever the term pilot is used in this article it is intended to include also navigators and bombardiers. The ratio in the number needed at present is: pilots, 5; navigators, 1; bombardiers, 1.

Secondary schools need to be alert to the contributions which they can make to the training of ground crews. The maintenance of planes is in no way less necessary than the flying of them; both are essential to a well-co-ordinated and effective air force; both can be trained for in secondary school.

The army and navy have developed three plans for securing aviation personnel—Army Air Force Immediate Service, Army Air Force Enlisted Reserve, and Navy V-1 and V-5 Programs. The materials in this article are pertinent to these plans.

HOW THE SCHOOLS MAY CONTRIBUTE

How may the schools best contribute to the training of aviation personnel? It is realized that no matter how well the schools do their job, the army and navy will have to put their flight and ground crews through a rigorous program of specialized training. The significance of preparation given in the schools is that if the armed forces are relieved of doing some of the elementary phases of training or if the period of such training can be shortened, the army and navy can concentrate more of their attention upon development of the

*This article contains excerpts, abstracts, and digests of materials from two source pamphlets, *Pre-Aviation Cadet Training in High Schools—Leaflet No. 62* and *Pre-Flight Aeronautics in Secondary Schools—Leaflet No. 63*. These leaflets, prepared by the U. S. Office of Education in co-operation with representatives of the U. S. Army, the U. S. Navy, and the Civil Aeronautics Administration, can be obtained from the U. S. Office of Education, Washington, D. C.

more specialized knowledges and skills so necessary to competency in military aviation. Thousands of lives may depend upon the promptness with which the contribution is made by the schools.

The secondary schools can contribute to the training of air force personnel in two important ways—*basic training* through the regularly offered subjects, especially training in mathematics, physics, and physical fitness, and *specialized courses* dealing more directly with particular phases of aviation.

BASIC TRAINING

The army and the navy have both emphasized the importance of celerity and accuracy in fundamental operations in mathematics¹ on the part of officers and enlisted personnel whatever their duties may be in modern warfare. For those who are to fly military planes facility in mathematical operations is especially significant as is evidenced by the fact that the army and the navy in the initial training periods give refresher courses in mathematics to their aviation cadets.

Similarly the air forces of both army and navy require their aviation cadets to have a working knowledge of physics. Here the problem is complicated since many of the young men coming to them as aviation cadets have not had courses in physics. The physics courses² for aviation cadets are outlined in Leaflet No. 62 which suggests intensive short courses. While some schools may wish to give such intensive review courses during the present school year, many schools may prefer to introduce aviation applications, problems, experiments, and activities into existing courses in mathematics and physics. This is but another way of saying that just as physics courses, for instance, have within the past quarter of a century been greatly influenced by the physics of the automobile, so the physics courses may appropriately now be influenced by the growing importance of the airplane.

Physical fitness always has been emphasized by the armed forces. It is particularly significant for those who are to fly military planes since special physical requirements have to be met by the flying personnel.³

Other subjects, commonly taught in secondary schools, can contribute in varying degree to the development of effective soldiers and sailors. English, geography and the social sciences, biology and chemistry, industrial arts and vocational subjects—these and others can provide knowledges and skills useful

¹The Army's manual entitled *Mathematics for Pilot Trainees* (TM 1-900) has been printed and is available from the Superintendent of Documents, Washington, D. C., at 10 cents a copy. Both the Army and Navy courses in mathematics are described in some detail in Leaflet No. 62, *Pre-Aviation-Cadet Training in High Schools* which was sent to secondary schools, public and private, by the U. S. Office of Education in May 1942.

²The Army manual *Elementary Physics for Pilot Trainees* (TM 1-233) is available from the Superintendent of Documents, Washington, D. C., at 20 cents a copy.

³For the most important of these physical requirements see Leaflet No. 62. This publication also contains a section on activities designed to develop that physical well-being without which no one can be accepted for military flying.

in the armed forces.⁴ The growing importance of the airplane in modern life, and just now in modern warfare, supports the view that a modern curriculum must be sensitive to the social, economic, industrial, and political changes brought about by the general adoption of this rapid mode of transportation.

SPECIALIZED TRAINING

Two types of specialized training related to war-time aviation are urgently needed:

1. Courses of a vocational-technical nature designed to train for the manufacture and maintenance of military aircraft. Information concerning such vocational-technical courses may be secured by addressing the U.S. Office of Education, Vocational Division.
2. Elective courses in pre-flight aeronautics offered to pupils in the junior and senior years of high school and to out-of-school youth who are approaching or have passed the age of 18—the age at which they can be accepted for aviation-cadet training by the army and navy. The present article deals primarily with such courses.

SELECTION OF PUPILS

Physical Requirements

An air pilot must be physically fit to stand up to the rigors of operating military planes. In the first place this requires youth. Candidates for training as aviation cadets in the navy must be between their 19th and 26th birthdays, and in the army between their 18th and 27th birthdays. In order to make sure that those accepted for aviation-cadet training have the physical potentialities to make good flyers both the army and the navy have very stringent physical requirements for admission to training.

The Navy requirements are listed in the *Manual of the Medical Department*, Section XXIII. While the stipulations cannot be summarized in this brief statement the following can be mentioned as basic requirements, failure in any one of which will be cause for rejection on physical grounds:

Normal vision 20/20 each eye, unaided by glasses.

Normal hearing.

Normal color vision.

Minimum height requirements 64 inches, maximum height requirements 76 inches.

Minimum weight requirements 124 pounds, maximum weight requirements 200 pounds.

Minimum blood pressure, systolic 105, maximum systolic 135.

No history of asthma or hay fever.

Freedom from rupture or evidence of abnormal relaxed rings, conducive to rupture.

Minimum of 18 sound teeth, 2 of which shall be opposing molars.

The recruiting manual for aviation cadets in the U. S. Army gives the following requirements:

Visual acuity 20/20 bilateral.

⁴See "The Best Kind of High-School Training for Military Service." *The Bulletin*, National Association of Secondary-School Principals, May 1942; pp. 5-8.

Normal color vision.
Unimpaired ocular muscle balance.
Unimpaired optical organism, anatomically and mechanically.
Good respiratory ventilation and vital capacity.
Hearing 20/20 each ear.
A stable equilibrium.
A sound cardiovascular system, nervous and organic.
A well-formed, well-adjusted, and co-ordinated physique.
Height, minimum 60 inches, maximum 76 inches.
An integrated and stable central nervous system.
A minimum of 12 teeth, 3 pairs each of serviceable, natural, opposing incisors and masticating teeth.

While the army and the navy are the only agencies that can determine with finality whether or not an individual can be accepted for aviation-cadet training, it is possible for a family or school physician to examine those desirous of becoming military pilots to ascertain if they have physical deficiencies which would almost certainly cause rejection; no young man whose physical condition clearly indicates that he cannot be accepted for flight training should be led to believe that he is getting pre-flight training in high school. Moreover, a physical examination may make it possible to correct some defects of a temporary nature, such as, diseased tonsils, underweight or overweight, dental defects, and the like.

Mental Requirements

The army and navy require screening tests for entrance into their flight-training classes. These have not been equated to mental-age score and I. Q's. These screening tests are necessary because of the need for aviation cadets who can learn easily and quickly those phases of science and mathematics connected with aviation. In order to save the secondary schools time in attempting to train pupils who will either fail the high-school courses in air physics and mathematics or later the training in the army and navy, secondary schools should consider carefully the mental qualifications of the boys who are candidates for the pre-flight physics and mathematics training recommended in these pages. Actual prerequisites of mathematics courses are desirable. The boys who have made above-average marks in these subjects may be encouraged to enter such classes if they also possess the physical qualifications. Boys who have not had physics or mathematics should be allowed to enter these classes, if through examination, with both verbal and non-verbal aptitude tests, they have shown that they are capable pupils.

The U. S. Office of Education will send lists of appropriate tests for this purpose to those who are interested.

THE SCHOOL'S PART IN THE TRAINING PROGRAM

After being accepted, the aviation cadet is given 40 weeks of intensive training by the army, 44 weeks (which is soon to be raised to 48 weeks) by

the navy. During this period the trainee is put through a rigorous program of physical conditioning, military drill, mathematics, physics, meteorology, air navigation, code, theory of flight, gunnery, and, of course, flight training with various other subjects related to maintenance and flying of military planes. The training program changes from time to time, but the over-all plan at present is approximately as described.

It will be observed that some of this training program can be carried out before entrance as an aviation cadet. In proof of this fact it may be pointed out that some secondary schools have developed pre-flight training courses. It is felt by those in charge of the training of military aviators in the army and navy that many more secondary schools can assist in this program and will be eager to do so. It is for those who have this interest that this article has been prepared.

Owing to the great need, it is urged that those secondary schools in position to do so offer pre-flight training during the present school year and during summer school. No one expects that the courses so offered can be complete, but something can be done in the areas of physical fitness, mathematics, and physics. Some schools may find it possible to offer work also in other subjects, such as, meteorology, International Morse Code, and plane nomenclature and recognition;³ but secondary schools generally are equipped to offer the three subjects first mentioned.

It is understood, of course, that no boy who elects to take pre-flight training courses in high school is thereby obligated to pursue flight training in the armed forces. Those interested in enlisting as aviation cadets should apply to the appropriate agencies in the army and navy. For the army these are known as Aviation Cadet Selection Boards; they are located in the principal cities and may be reached through the local Selective Service Board. For the navy the agency is the Naval Cadet Selection Board, which has representatives at every Naval Reserve Base; local Navy Recruiting Stations can supply the address of the nearest Naval Reserve Base. The following administrative arrangements are suggested as practicable for short courses.

I. A short course of a month or 6 weeks to be offered to qualified seniors and recent graduates.

II. A summer-school or evening-school course of from 6 to 12 weeks offered to recent graduates and drop-outs.

³Those interested in thus expanding their courses will find the following references useful:

1. For Meteorology:
CAA Bulletin No. 25. Meteorology for Pilots—B. C. Haynes, Civil Aeronautics Administration, Department of Commerce, Washington, D. C.
2. For International Morse Code:
Secure publications from American Radio Relay League, Hartford, Conn.
3. For Plane Nomenclature and Recognition:
Scale Model Aircraft Construction Procedure—Robert W. Hambrook, U. S. Office of Education, Federal Security Agency, Washington, D. C.

OUTLINES OF PRE-AVIATION SHORT COURSES FOR BASIC TRAINING

MATHEMATICS

Both the army and the navy required a mathematical background for flying that includes more than a 75 per cent proficiency. For pupils who have had mathematics, a review course aiming at complete mastery is recommended; for others, an intensive training in the fundamentals of mathematics. Brief outlines of courses in basic mathematics used in the Army and Navy Training Schools follows:

*Mathematics for the Army*⁶

The war department manual covers a type of mathematics which is required that an aviation cadet know before he can go on with more specialized flight-training. Some of the sections included in this course are:

Fundamental Operations: Addition, subtraction, multiplication, division, conversion of decimal fractions to common fractions, and the reverse operation; addition, subtraction, multiplication, and division of fractions; ratio and proportion; positive and negative numbers; addition, subtraction, multiplication, and division of positive and negative numbers; and miscellaneous exercises.

Equations and Formulas.

Scales: Models, maps, and miscellaneous exercises.

Graphs: Reading graphs, and construction of graphs from data.

Angular Measurement: Angles and units of angle measurement; course, heading, and drift; and exercises.

Vectors: Triangle of velocity and miscellaneous exercises.

*Mathematics for the Navy*⁷

The navy department has a 24-period course now in operation. The following general description is quoted from the *Ground Training Syllabi* of the navy:

Arithmetic: Adding, subtracting, multiplying, dividing of whole numbers, decimal fractions (hours, minutes, seconds, and degrees, minutes, seconds).

Equation and Formulas: Solving equations of first power and simple quadratics with an unknown. Substituting values in formulas and solving for unknown in such types as areas, volumes, lift equation, drag equation, and horsepower equation.

Graphs and Charts: Plotting of graphs relative to airplane and engine operation from data. Interpretation of the meaning of curves. Plotting simple vectors and elementary vector analysis.

Ratio, Proportion and Percentage: Computation of gear train and lever ratios. Proportional sizes of parts as scaled in drawing. Computation of percentage and efficiencies and interpretation of meanings of percentage values in terms of fractions.

Geometry: Solution for sides of a right triangle by arithmetic. Use of protractor and

⁶As contained in *Mathematics for Pilot Trainees* (TM 1-900) by the War Department, Superintendent of Documents, Washington, D. C. 10 cents.

⁷As contained in *Practical Mathematics*, by Downer, Pitman Publishing Corporation, New York and Chicago.

computation using degrees, minutes, seconds. Omit trigonometry. Definitions of geometric shapes and terminology.

PHYSICS

The Army and Navy Air Forces each has a course^{*} in the fundamentals of physics which the cadets being trained for flying must take in the first few weeks of their training. The army course is almost entirely concerned with mechanics, while the navy course includes about 60 per cent mechanics and 40 per cent heat, electricity, sound, and light. In the following recommended list of topics to be covered in a high-school course, an attempt has been made to stick to the fundamentals which are applicable to what both the army and navy want. The last three sections—those dealing with electricity, sound, and light—cover the basic work called for by the navy course of study; these are omitted entirely by the army course of study. The type of instruction recommended in these courses is regular class work without individual laboratory work. Demonstration apparatus should be used sparingly. The topics suggested include:

Units of Measurement: Volume, weight, density, time, distance, and velocity.

Simple Machines and Balanced Forces: Levers, principle of movements, mechanical advantage, center of gravity, wheel and axle, and conditions of equilibrium.

Laws of Motion: Newton's laws of motion, constant acceleration, positive and negative acceleration, force of gravity and acceleration, and centrifugal and centripetal forces.

Work and Power: Work, applications of inclined plane and screws, energy, power, horsepower, friction, and efficiency of machines.

Properties of Liquids: Archimedes' principle, buoyancy, pressure in liquids, and specific gravity and density.

Properties of Gases: Kinetic theory, Boyle's law, Charles' law.

The Atmosphere: Density, pressure of the atmosphere, application of gas laws to the atmosphere, clouds, vapor pressure, dew point, specific humidity, relative humidity, heating and atmosphere, and terrestrial and solar radiation.

Resolution of Forces: Representation of forces by vectors, principle of parallelogram of forces, resolution of forces, and application of resolution of forces to boats and airplanes.

Temperature and Heat: Thermometer—scales, expansion of solids with heat, melting, freezing, specific heat, heat of vaporization, and condensation, relation of temperature to changes in volume and pressure of gases.

Electricity: Measurement of electrical currents—amperes, ohms, and volts, electrical power, and electrical energy.

Sound: Fundamental concepts of wave motion in sound, velocity, intensity, reflection, and refraction.

^{*}(a). Used in the Army Air School:

Physics for Pilot Trainees. (TM 1-233). Available from the Superintendent of Documents, Washington, D. C. at 20 cents a copy.

(b). Used in the Navy:

An Introductory Course in College Physics, by Black. 1941 edition. Published by Macmillan Company, New York.

Light: Fundamental concepts of wave motion in light, velocity, reflection, intensity, and refraction.

PHYSICAL EDUCATION

Both the army and the navy lay a great deal of stress on physical fitness and especially on physical fitness of airplane pilots. The severe physical requirements for entrance are an indication of this emphasis. So are the time allotments and the types of exercises recommended. In the navy training program, for instance, more than half the time of the trainee during the first 12 weeks is given to a combination of physical education, infantry drill, military arts, and radio code.

Neither the navy nor the army has issued a manual on physical education specifically for pilots similar in scope to the suggestions available on mathematics and physics. The following outline may be found useful as indicating the character of the physical educational work:

1. A stipulated time for getting dressed for the physical period and reporting to their stations.
2. A 5- to 10-minute warm-up run outdoors broken into jogging and walking. Deep breathing exercises at the end and a few minutes of rest.
3. A 15-minute period of setting-up exercises. In this connection the navy has developed a program which has been released under the title **Tentative Fitness Program of the U.S. Navy**.
4. As the main activity of the period a program of team games and athletic sports involving competition and as much physical contact as possible without unnecessary risks. **All should participate.** Among the games and sports recommended are: Baseball, handball, touch football, soccer, swimming, water polo, relays, running and jumping, gymnastics, acrobatics, tumbling, wrestling, and boxing. The five sports last mentioned are especially appropriate for aviators since they call for a sense of "whereaboutness" not present in some others.
5. A stipulated time for taking showers and getting dressed.

On occasion it may be practicable to plan longer excursions involving hikes, water trips, and overnight camping in the open. The activities should be developed with the idea of challenging ingenuity and endurance; they are not conceived of as excursions providing comforts and conveniences of home.

OUTLINE FOR PRE-FLIGHT AERONAUTICS

A few schools have developed comprehensive long-range curriculums involving 3-year or 4-year sequences of subjects to be taken by pupils who wish to specialize in aviation. The majority of secondary schools, both large and small, cannot be expected suddenly to establish comprehensive programs in aviation education of the kind mentioned above. It is believed that many will offer 1-year or 2-year elective courses in pre-flight aeronautics.

The pressing need of the army and the navy for flight personnel suggests that by doubling the time allotment the first-year course in aeronautics

can be completed in 1 semester, each pupil under this plan giving approximately half of his time to the subject. Such a plan is especially appropriate where many of those registering for the course are near or over 18 years of age or within 1 semester of graduation from high school. There appears to be no good reason for accelerating the aeronautics courses of those who are destined to remain in school for more than a year before they will be eligible for army or navy training.

The outline of subject matter which is presented in the following pages includes only such teaching units as are calculated to be of definite usefulness in the preliminary preparation of flying personnel for the armed forces. The outline is intended to be broadly definitive of the field of pre-flight aeronautics for prospective aviation cadets rather than narrowly prescriptive.

In general, the 11 units, providing material for 4 semesters' work, have been arranged in sequential teaching order. The units are also arranged in an order of priority as to their value for pre-aviation cadet training. That is to say, army and navy aviation officials have expressed the judgment that if only 1 semester's work of 90 hours can be given in any school, units 1—4, inclusive, are of greatest probable value. If 2 semesters' work can be offered, units 5—7, inclusive, should be added; and similarly for semesters 3 and 4 as shown in the following chart:

RECOMMENDED UNITS IN A PRE-FLIGHT AERONAUTICS COURSE
WITH TENTATIVE TIME ALLOTMENTS

First Semester

	<i>Periods</i>
Unit 1. Orientation—overview of military aviation.....	5
Unit 2. Aircraft structures and identification of military aircraft.....	20
Unit 3. Aerodynamics	30
Unit 4. Power plants.....	35

Second Semester

Unit 5. Communications I	20
Unit 6. Meteorology I	30
Unit 7. Avigation I	40
Total.....	180

Third Semester (2nd year)

Unit 8. Gliding	20
Unit 9. Meteorology II	30
Unit 10. Avigation II.....	40

Fourth Semester (2nd year)

Unit 11. Communications II	
(a) Advanced radio.....	40
(b) Radio code practice.....	50
Total.....	180

UNIT I. ORIENTATION: OVERVIEW OF DEVELOPMENT OF AVIATION AND OUR AIR FORCES

The purpose of this unit is to provide an overview of the scope of the course and to afford the instructor an opportunity to become acquainted with the members of the class. In this brief unit pupils are introduced to some of the important personalities in aviation history and are given a general overview of modern military aviation.

UNIT II. AIRCRAFT STRUCTURES AND IDENTIFICATION OF MILITARY AIRCRAFT

This unit begins with an analysis of the various types of planes and their component parts, in the course of which pupils should become familiar with the proper nomenclature of the airplane. The unit will acquaint pupils with the materials used in the construction of aircraft and will give an understanding of how planes are fabricated, tested, and inspected. In studying identification of aircraft, the training should tend toward recognition of the whole plane by its silhouette, rather than an analysis of minute details. Scale models should be used in demonstration, and silhouette wall charts provided.

UNIT III. AERODYNAMICS

The purpose of this basic unit is to acquaint the pupils with the various physical laws which govern flight, also their application to the several theories of flight and to the control of a plane in flight. Stresses and strains on various parts of the aircraft should be studied, and problems solved. The designing, building, and test flying of aircraft models provides a valuable activity for demonstrating the applications of principles outlined for study in this unit.

UNIT IV. POWER PLANTS

In this unit, the principles of operation of the two-stroke cycle, four-stroke cycle (commonly called two-cycle and four-cycle), and diesel engines are taught; also the classification of engines, with the advantages and disadvantages of various types. Design factors involved in handling metals of different rates of expansion and advantages of water and air cooling are outlined. A functional study of carburetors, ignition systems, engine accessories, and instruments is made. Fuels and lubricants are studied in a fundamental manner. Types of propellers are discussed in connection with engines, as the engine and propeller are analyzed together as a complete power unit.

UNIT V. COMMUNICATIONS I

It is not the intent of this unit to produce advanced radio technicians. A brief descriptive survey of radio circuits is presented as to their use in radio telephony and telegraphy, radio beams, and radio aids to blind landing. Teletype operation, together with the general organization of communications work on the ground and in the air, is taught from a functional point of view.

Any time remaining may be devoted to the improvement of the pupil's technique of sending and receiving audible signals in accordance with army and navy suggestions.

UNIT VI. METEOROLOGY I

The purpose of this unit is to give an elementary understanding of atmospheric phenomena and to show how they affect flying.

This unit concerns itself with fundamental cloud types, circulation of air, variations caused by changes of temperature and air pressure.

Safety as an integral part of flight planning should be stressed. The need is great for pilots who can, through difficult conditions, reach their objective, discharge their mission, and return. The commercial value of safety is equally important in all activities in which the pilot may engage.

UNIT VII. AVIGATION AND INSTRUMENTS

This basic unit is designed to serve as an introduction to the more intensive study of air navigation by prospective flyers. A review of geography should make every pupil solidly familiar with spherical coordinates, time zones, and general physical composition of the world. The principle and operation of the several methods used in getting from place to place through the air should be explained. A functional study will be made of the various instruments in the cockpit exclusive of engine instruments which were taken up in Unit IV.

UNIT VIII. GLIDING

The development of gliding as a training activity will be discussed, showing its value in the field of plane design, its military uses, and its possibilities as a sport or a vocation. A description of equipment and methods of conducting gliding training will be outlined.

A few schools in suitable locations may find it possible to undertake actual gliding training under state supervision and in conformity with state and Federal laws. Many schools can provide profitable experience to pupils in the designing, building and test flying of scale models of full-sized gliders. Building full-sized gliders or parts of gliders may be undertaken in school shops, but only under expert supervision.

UNIT IX. METEOROLOGY II (ADVANCED)

A brief review of Unit VI should be made before taking up a more advanced study of cloud types, their formation, and interpretation. Weather maps should be obtained and studied together with symbols used in weather map making. A further study of movements of fronts will help the pupil later in avigation. The vocabulary of the class should be widened in technical terms that form a part of this unit. Practical situations and problems in flying presented by line storms, icing, and fog should be discussed by the instructor with the pupils.

UNIT X. AVIGATION II (ADVANCED)

A brief review of Avigation I should be made before taking up the more advanced study of avigation in this unit. Although some of the topics in the outline of Unit X parallel those given in Unit VII, the treatment should be considerably more advanced in character and exhaustive in scope. More practice in the mathematical aspects of avigation is to be given with the aim of developing speed and accuracy in handling practical avigation problems.

UNIT XI. COMMUNICATIONS II (ADVANCED)

Because of demonstrated need as cited by both the army and navy, this unit is included to give pupils a clear understanding of the radio equipment used in military services. The pupils should become used to the technique of clear speech into a microphone and the sound of commands through ear phones. A simple home-constructed public address system with ear phones will serve as technical training equipment. A speed of 15 words per minute in sending and receiving radio code signals should be developed. This unit continues instruction started in Unit V to a more advanced stage.

ADJUSTMENT TO MEET LOCAL CONDITIONS

The 360-hour course in pre-flight aeronautics, as summarized in the afore-mentioned chart and as outlined in the ensuing pages, can be adjusted to meet specific conditions of secondary schools, whether large or small, public or private, in various parts of the country. Thus, by devoting 10 periods per week throughout 2 semesters a particular group of pupils should be able to cover all of the units outlined. Similarly, by devoting 10 periods per week throughout 1 semester, the first 7 units can be covered. Again, if tests disclose the need therefore with any particular group of pupils, a refresher course in essential mathematics and physics (as outlined above) can precede the pre-flight aeronautics course, in which case the fourth semester's unit in communications would be omitted.

Some schools may wish to offer only certain selected units of the course outlined. In that case the arrangement of the units in order of priority should be borne in mind. In some schools enthusiastic teachers and pupils may wish to cover a number of units in a course meeting after school hours. Again, classes organized for out-of-school youth to meet in the late afternoon or evening can be scheduled to cover any number of units depending upon the amount of time available.

THE PUPIL'S PROGRAM

The paramount importance of mathematics and physics supports the suggestion that pupils desiring to become aviation cadets should take as much mathematics as possible, and if they have not previously had physics they should take that subject concurrently with the aeronautics course. The stress laid upon physical fitness dictates that remediable defects be corrected and that a vigorous physical training program be introduced to precondition them for military aviation. The remainder of their programs may be made up from English, social studies, industrial arts, and other subject areas offered in the secondary school.

The following daily pupil programs are suggested for consideration:

1. Pupil having only 1 semester left before graduation, or out-of-school youth returning for training in aeronautics.

<i>Subject</i>	<i>Daily time allotment for 1 semester</i>
Aeronautics (First and second semester units).....	2 periods.
Review of mathematics.....	1 period.
Mechanics of physics.....	Do.
Physical fitness.....	1-1½ hours.

2. Pupil having 2 semesters left before graduation.

First semester

<i>Subject</i>	<i>Time allotment</i>
Aeronautics (First semester units).....	1 period daily.

Mathematics.....	Regular time assignment.
Physics ^a	Do.
Required or elective subject.....	Do.
Physical fitness.....	1—1½ hours daily.

Second semester

Aeronautics (Second semester units).....	1 period daily.
Mathematics.....	Regular time assignment.
Physics ^a	Do.
Required or elective subject.....	Do.
Physical fitness.....	1—1½ hours daily.

OR

First semester

<i>Subject</i>	<i>Time allotment</i>
Aeronautics (First and second semester units).....	2 periods daily.
Mathematics.....	Regular time assignment.
Physics ^a	Do.
Physical fitness.....	1—1½ hours daily.

Second semester

Aeronautics (Third and fourth semester units).....	2 periods daily.
Mathematics.....	Regular time assignment.
Physics ^a	Do.
Physical fitness.....	1—1½ hours daily.

3. Pupil having 2 years left before graduation.

First semester

<i>Subject</i>	<i>Time allotment</i>
Aeronautics (First semester units).....	1 period daily.
Mathematics.....	Regular time assignment.
Physics.....	Do.
Required or elective subject.....	Do.
Physical fitness.....	1—1½ hours daily.

Second semester

Aeronautics (Second semester units).....	1 period daily.
Mathematics or elective subject.....	Regular time assignment.
Required or elective subject.....	Do.
Required or elective subject.....	Do.
Physical fitness.....	1—1½ hours daily.

Third semester

Aeronautics (Third semester units).....	1 period daily.
Mathematics or elective subject.....	Regular time assignment.
Required or elective subject.....	Do.

^aIf not previously taken. If physics has been studied, substitute an elective subject.

Required or elective subject.....	Do.
Physical fitness.....	1—1½ hours daily.

Fourth semester

Aeronautics (Fourth semester units).....	1 period daily.
Mathematics or elective subject.....	Regular time assignment.
Required or elective subject.....	Do.
Required or elective subject.....	Do.
Physical fitness.....	1—1½ hours daily.

Supplementary Selected References

- Air Youth of America. *Youth in Aviation; an Air Youth Manual for Leaders*. New York: Appleton-Century. 1941. 265 pp. \$2.50.
- *Arey, Charles K. *Elementary School Science for the Air-Age*. New York: Macmillan. 1942. 72c.
- Arnold, H. H., Lt. Gen., and Eaker, Ira C., Brig. Gen. *Army Flyer*. New York: Harper and Brothers. 1942. 299 pp. \$2.50.
- *Aviation Education Research Group, Teachers College, University of Nebraska. *Elements of Pre-Flight Aeronautics for High Schools*. New York: Macmillan. 1942. 96c.
- *Aviation Education Research Group, Teachers College, Columbia University. *Science of Pre-Flight Aeronautics for High Schools*. New York: Macmillan. 1942. \$1.32.
- *Aviation Education Research Group, Teachers College, University of Nebraska. *Teachers' Manual for Elements of Pre-Flight Aeronautics for High Schools*. New York: Macmillan. 1942. 72c.
- Bagley, James W., Lt. Col. U. S. Army, Retired. *Aero-photography and Aero-surveying*. New York: McGraw-Hill. 1941. 324 pp. \$3.50.
- *Bartlett, Hall. *Social Studies for the Air-Age*. New York: Macmillan. 1942. 60c.
- *Bauer, Hubert A. *Globes, Maps, and Skyways*. New York: Macmillan. 1942. 40c.
- Bloomquist, A. E. *Outline of Air Transport Practice*. New York: Pitman Publishing Corporation. 1941. 402 pp. \$4.50.
- *Buchan, A. F., Borthwick R., and Wadden, William R. *Aviation Mathematics*. New York: Houghton Mifflin. 1942. 136 pp.
- *Cohen, Rose M. *Flying High* (Anthology). New York: Macmillan. 1942. 76c.
- Colvin, Fred H. *Aircraft Handbook*. 5th ed. New York: McGraw-Hill. 1942. 784 pp. \$5.00.
- *Cross, E. A. *Wings for You* (Anthology). New York: Macmillan. 1942. 76c.
- *Engelhardt, N. L., Jr. *Education for the Air-Age*. New York: Macmillan. 1942. 24c.
- *Fitzpatrick, Frederick L. and Stiles, Karl A. *The Biology of Flight*. New York: Macmillan. 1942. 64c.

- *Fitzpatrick, Frederick L. and Stiles, Karl A. *Teachers' Manual for the Biology of Flight*. New York: Macmillan. 1942. 56c.
- Hamburg, Merrill and Tweney, George. *Aviation for High Schools*. New York: Pitman Publishing Corporation, Publishing date about September 8. Approx. 600 pp. \$1.50.
- Harlacher, Carl M. *Aircraft Propellers*. Glendale, Calif.: Aero Publishers, Inc. 1941. 119 pp.
- Hartney, Harold E., Lt. Col., (Inactive) U. S. Army. *Complete Flying Manual*. New York: National Aeronautics Council. 1940. 123 pp.
- Hume, D. C. M. *Elementary Aerodynamics*. 2d ed. New York: Pitman Publishing Corporation. 1941. 136 pp.
- Knerr, Hugh J., Col., Air Corps., U.S.A. *Student Pilot's Training Primer*. New York: D. Van Nostrand. 1941. 172 pp.
- Lee, John G. *Fighter Facts and Fallacies*. New York: William Morrow. Publishing date about November 11. \$1.25.
- *Manzer, J. G.; Peake, M. M.; and Leps, J. M. *Physical Science in the Air-Age*. New York: Macmillan. 1942. 80c.
- Naidich, James. *Mathematics for the Aviation Trades*. New York: McGraw-Hill. 1942. 267 pp. \$1.50.
- *Osteyee, George. *Mathematics in Aviation*. New York: Macmillan. 1942. 64c.
- Patton, Orion Edward. *Aircraft Instruments. Their Theory, Function, and Use*. New York: D. Van Nostrand. 1941. 220 pp.
- *Renner, George T. *Human Geography in the Air-Age*. New York: Macmillan. 1942. 64c.
- *Renner, George T. and Bauer, Hubert A. *The Air We Live In*. New York: Macmillan. 1942. 36c.
- Robinson, Mrs. P. T. and others. *Essentials of Aeronautics*. New York: Henry Holt. 1942. Vol. 1, 352 pp. \$1.08. Vol. 2, 352 pp. \$1.08.
- Smith, Henry Ladd. *Airways*. New York: Alfred A. Knopf. 1942. 430 pp. \$3.50.
- *Stover, George Franklin. *Teachers' Manual for Science of Pre-Flight Aeronautics for High Schools*. New York: Macmillan. 1942. 80c.
- Suddeth, James H., Lt., A-V(S), U.S.N.R. *Airplane Engine Maintenance*. New York: John Wiley & Sons. 1942. 374 pp. \$2.75.
- U. S. Office of Education. *Airport Servicemen's Dictionary*. Washington, D. C.: Federal Security Agency, Office of Education, Vocational Training for Defense Workers, 1941. 37 pp. (Misc. 3439-11. Airport Servicemen's Training Program, Lesson 11).
- U. S. Office of Education. *Aviation Course for High Schools as Developed for the District of Columbia*. Washington, D. C.: the Office. 1942.
- U. S. Office of Education. *Aviation Periodicals for Class and Club Use*. Washington, D. C.: the Office. 1942. 4 pp. (Misc. 2179) Free.

U. S. Office of Education. *Aviation Training for Women*. Washington, D. C.: the Office. 1941. 11 pp. mimeo. (Misc. 2594) Free.

Vetter, Ernest G., Lt. U.S.N.R. *Visibility Unlimited*. New York: William Morrow. Publishing date Nov. 25. Approx. 356 pp. \$3.50.

*Wilber, Gordon O. and Neuthardt, Emerson E. *Aeronautics in the Industrial Arts Program*. New York: Macmillan. 1942. 92c.

Two other books soon to come off the press will also be found useful in this course of "Pre-Flight Aeronautics." These books are *Happy Landings*, an anthology on aviation, by Herberg, Panie, and Works (about January, 1943), and *Why We Are at War*, by Slosson (about October 15). They will be published by Houghton, Mifflin Company, New York.

*The Air-Age Education Series prepared by the Aviation Education Research Project under the auspices of the Civil Aeronautics Administration.

LIST OF PUBLISHERS AND THEIR ADDRESSES

1. Aero Publishers, Inc., Glendale, Calif.
2. Aeronautical Chamber of Commerce of America, Inc., 30 Rockefeller Plaza, New York City.
3. American Radio Relay League, West Hartford, Conn.
4. American Technical Society, 850 East 58th Street, Chicago, Ill.
5. Appleton-Century Co., Inc., 35 West 32d Street, New York City.
6. Chemical Publishing Co., 148 Lafayette Street, New York City.
7. Crowell. Thomas Crowell Co., 432 4th Avenue, New York City.
8. Dodd, Mead & Co., Inc., 443-449 4th Avenue, New York City.
9. Drake & Co., Inc., 179 North Michigan Avenue, Chicago, Ill.
10. Duell, Sloan, & Pearce, 270 Madison Avenue, New York City.
11. Dutton & Co., Inc., 286-302 4th Avenue, New York City.
12. Funk & Wagnalls Co., 354-360 4th Avenue, New York City.
13. Goodheart-Wilcox Co., Inc., 2009 South Michigan Avenue, Chicago, Ill.
14. Harcourt, Brace & Co., Inc., 383 Madison Avenue, New York City.
15. Harper & Brothers, 49 East 33d Street, New York City.
16. Heath. D. C. Heath & Co., 285 Columbus Avenue, Boston, Mass.
17. Henley. The Norman W. Henley Publishing Co., 2 West 45th Street, New York City.
18. Jay Publishing Co., 551 5th Avenue, New York City.
19. McGraw-Hill Book Co., Inc., 330 West 42d Street, New York City.
20. National Aeronautics Council, Inc., 37 West 47th Street, New York City.
21. Norton & Co., Inc., 70 5th Avenue, New York City.
22. Penguin Books, 300 4th Avenue, New York City.
23. Pitman Publishing Corporation, 2-6 West 45th Street, New York City.
24. Ronald Press Co., 15 East 26th Street, New York City.
25. United States Government Printing Office, Washington, D. C.
26. Van Nostrand, D. Van Nostrand Co., Inc., 250 4th Avenue, New York City.
27. Whittlesey House (McGraw-Hill Book Co.), 330 West 42d Street, New York City.
28. Wiley and Sons, Inc., 440 Fourth Avenue, New York City.
29. World Book Co., 313 Park Hill Avenue, Yonkers-on-Hudson, N. Y.

SUMMARY CHART* OF SELECTED REFERENCES

	I. Orientation	II. Structure	III. Aerodynamics	IV. Power Plants	V. Communications I	VI. Meteorology I	VII. Aviation I	VIII. Gliding	IX. Meteorology II	X. Aviation II	XI. Communications II	Publisher's Number **
American Radio Relay League:												
Learning the Radio Telegraph Code.....				x								3
The Radio Amateur's Handbook.....				x								
American Technical Society. Flight (4 vols.):												4
1. Wright, Smiley, and Martin. First Principles.....	x	x										
2. Wright, Dyer, and Martin. Construction and Maintenance.....		x										
3. Wright, Dyer, and Martin. Meteorology and Aircraft Instrument.....					x							
4. Kuns. Aviation Engines.....			x									
Arnold, H. H. This Flying Game.....	x											12
Barringer, L. B. Flight Without Power.....							x					23
Baughman, Harold E. Baughman's Aviation Dictionary and Reference Guide.....		x										1
Black, Archibald. The Story of Flying.....	x											19
Brimm, D. J., and Boggess, H. E.: Aircraft Maintenance.....		x										23
Aircraft Engine Maintenance.....			x									
Brown, Willis C. Airplane Models and Aviation.....			x									16
Chatfield, Taylor and Ober. Airplane and Its Engine.....			x									19
Chemical Publishing Co. The Meteorology Glossary.....					x							6
Civil Aeronautics Administration:												25
Civil Pilot Training Manual. Bulletin No. 23.....		x										
Practical Air Navigation. Bulletin No. 24.....					x				x			
Meteorology for Pilots. Bulletin No. 25.....					x			x				
Aerodynamics for Pilots. Bulletin No. 26.....		x										
Pilots' Airplane Manual. Bulletin No. 27.....	x											
Pilots' Power Plant Manual. Bulletin No. 28.....			x									
Pilots' Radio Manual. Bulletin No. 29.....			x	x						x		
Ground Instructors' Manual. Bulletin No. 30.....		x	x		x	x						
Duncan, Richard. Air Navigation and Meteorology.....								x	x			13
Finch, Trewartha, Shearer, Candle. Elementary Meteorology.....					x							19
Ford, H. S. What the Citizen should Know About The Army.....	x											21
Fraser, Chelsea. Famous American Fliers.....	x											7
Gillmer, Thoman C., and Nietsch, Herman E. Simplified Theory of Flight.....			x									26

*This chart refers to units that have been listed above in this article as recommended in a pre-flight aeronautics course. Each book or pamphlet will be found to be especially helpful as source material for the units that are indicated in the chart.

**The section following this list of books contains Arabic numbers which correspond to the Arabic numbers in this column. To use this chart for ordering textbooks listed herein, the Arabic numbers indicate the publisher which is given in the following section entitled "List of Publishers and Their Addresses."

Pre-Induction Training in Secondary Schools for Army Service

One of the major responsibilities of our educational system is that of maintaining an adequate flow of trained manpower for our armed forces. In a few of the needed army skills the supply is adequate for present purposes. In some others the army can meet its needs through civilian schools on a full-time basis and through utilization of existing facilities. In a very large number of army occupations, however, the shortages are so critical that immediate steps must be taken to remedy the situation.

WHO MAY TAKE THESE COURSES

The time of men awaiting induction should be utilized for foundational training that will prepare them to fill in the gaps and shorten the period of post-induction training. The age groups, eighteen to forty-five, must be induced to enroll at once in evening courses designed to provide the necessary preliminaries for the special occupation required for a modern army. The age groups, sixteen to eighteen, now in the secondary school, can be guided similarly into courses planned to meet the critical shortages.

It is expected that specific announcements along these lines will soon reach the schools, making explicit the various and necessary administrative arrangements under which this work can be undertaken. Eligibility requirements for admission to pre-induction training courses in terms of educational, physical, and draft status will be set forth. School administrators are strongly urged to plan their programs of part-time, adult, and evening-school education for the coming year so as to make possible the inclusion of pre-induction courses. The present emergency indicates clearly and emphatically that the first important curriculum change must include pre-induction training.

THE SCHOOLS CAN CONTRIBUTE TO PRE-INDUCTION TRAINING

First is the *foundational level*. For about 20 per cent of our boys in and out of school, a war-enriched course in physics and mathematics, as outlined in a previous article of this issue of *THE BULLETIN*, will give excellent background for continued specialization at the college level. They will constitute a reservoir from which many of our officers will be drawn. For the remainder of the boys in and out of school, more specific fundamental courses are needed. A large variety of such courses are possible. However, critical shortages would indicate that the following can make the greatest immediate contribution to the flow of trained manpower: *Fundamentals of Electricity*, *Fundamentals of Machines*, and *Fundamentals of Shopwork*.

A second type of pre-induction training can be given on the level of *beginning specialization courses*. Where time permits, a first-level course can well be made a prerequisite. However, second-level courses should be so designed that imminent inductees can enter upon them without prelimi-

naries. Again, a wide variety of courses are possible and would prove useful. Yet, critical shortages point emphatically to the following as the greatest needs: *Fundamentals of Radio* and *Fundamentals of Automotive Mechanics*.

Our vocational and technical schools and many general secondary schools can offer pre-induction training of a third level of specialization, with courses designed to furnish a considerable degree of *operational skill*. There are many courses of this type which might be developed, the following would make a maximum contribution to army needs at the present time: *Code Practice and Touch Typing* and *Radio Maintenance and Repair*.

The armed services have developed excellent course material for teaching *Code Practice and Touch Typing*. This material is used in connection with training work in the Signal Corps and other services. The schools of the nation can, however, save valuable post-induction training time by giving such courses prior to the induction of pupils. In order to insure uniform presentation, the Army Manual (TM 11-454) should be used.

A careful and analytical study of the Technical and Field Manuals used by the army in its post-induction training, reveals unmistakably that clear understandings are essential for the development of the needed skills. Without such understandings, development of the skills are difficult and sometimes impossible. Again and again the army manuals devote many hours of valuable time to a kind of teaching and learning which could have been part of the mental equipment which the inductee brings with him to the army. The objectives of the post-induction training process show a fine interweaving of and interdependence between skills and understandings.

To facilitate the training of radio operators in civilian schools, particularly those in which such training has not previously been given, the Signal Corps, in co-operation with the U. S. Office of Education, the Army Institute, and other interested agencies is preparing a *Code Kit*. This kit will contain standard 12 inch phonograph records for determining whether prospective pupils have (a) the necessary aptitude, (b) records for elementary code instruction and progressively increasing operating speeds, (c) printed forms for use in the Code Aptitude Test and Code practice, (d) wall charts of instructional and inspirational material (a sending practice key and buzzer), and (e) instructor's notes. The kits will make it possible to teach radio operators in any school which has an ordinary phonograph. These kits will be available shortly from the U. S. Office of Education, Washington, D. C.

HOW THE SCHOOLS CAN PROVIDE THESE COURSES

The secondary schools of the country can assist the army and help win the war by modifying the curriculum for boys in the last two years of the secondary-school course. This modification involves the simple requirement that one or two class periods a day be devoted to pre-induction work for every

boy during the eleventh and twelfth grades. The war emergency demands that peace-time sequences of course be modified to the extent that a unit of pre-induction work be considered the equivalent of any other unit.

In general, it is recommended that at least one period of pre-induction work be scheduled each day for every boy in the eleventh and twelfth grades. Boys who have only one year left before graduation can devote the period of pre-induction training to the study of *Fundamentals of Electricity* (1-semester course) and *Fundamentals of Shopwork* (1-semester course) or *Fundamentals of Machines* (1-semester course) and *Fundamentals of Shopwork* (1-semester course). If these boys have already had a year of physics or are in other ways qualified to take more specialized work, they may be enrolled in *Fundamentals of Radio* (one-year course) or *Fundamentals of Automotive Mechanics* (one-year course). Boys who have only one semester left before graduation should devote two periods a day to pre-induction work and thus accomplish the program suggested above.

Boys who have two years left before graduation can devote a period a day for two years to the study of the following courses: Eleventh Year—*Fundamentals of Electricity* (one semester course) and *Fundamentals of Shopwork* (one semester course) or *Fundamentals of Machines* (one semester course) and *Fundamentals of Shopwork* (one semester course); Twelfth Year—*Fundamentals of Radio* (one-year course) or *Fundamentals of Automotive Mechanics* (one-year course). Boys who have three semesters left before graduation can accomplish the program suggested above by devoting two periods to the work the first semester.

In many vocational and technical schools and in some general secondary schools, the equipment and personnel may be available for offering courses in *Code Practice and Touch-Typing* and/or in *Radio Maintenance and Repair*. Courses of this kind would make an important contribution to army needs and should be given to qualified boys in their twelfth year, in place of the suggestions made in the paragraph immediately preceding.

VICTORY CERTIFICATES

Victory certificates will be awarded to pupils who have successfully completed a pre-induction course. The certificate will accompany the man to Army Reception Centers and will be used as evidence in determining the initial assignment of the man to the army job for which he is to be trained. Victory certificates may be secured by school superintendents, principals, headmasters, or other recognized school officials, by requesting the same of the U.S. Office of Education on official stationery, after pre-induction classes are started and upon certification of enrollment in these classes. In several branches of the army qualifying examinations are given to inductees. On the basis of these examinations, individuals are permitted to progress in their training from the point of initial competence they possess when they arrive.

High School Victory Corps

The High School Victory Corps¹ announced on September 25 by President Roosevelt, the Chief State School officers, and through a nation-wide radio program arranged by the U. S. Office of Education, is a national voluntary organization for secondary schools. The purpose of the organization is to mobilize secondary-school pupils for more effective preparation for, and participation in war-time service.

NATIONAL POLICY COMMITTEE FOR THE HIGH SCHOOL VICTORY CORPS

Early in the summer of 1942 a special committee of the U. S. Office of Education War-time Commission began a study of the general problem of war-time service organizations in secondary schools. On July 15 and 16 the Assistant Secretaries of War and Navy for Air and the Special Aviation Assistant to the Secretary of Commerce, in writing, endorsed a proposal under which the U. S. Office of Education would assume the official responsibility for the Federal government in developing an organization and a program of aviation education in the secondary schools of the country. On July 22 the War-time Commission unanimously approved a report of the special committee referred to above.

As a consequence of the proposal endorsed by the three departments and of the action taken by the War-time Commission, the Administrator of the Federal Security Agency requested the Secretaries of the War, Navy, and Commerce Departments to designate their official representatives on a Policy Committee to assist in the development of a plan for the war-time readjustment of the organization and curriculums of secondary schools. The Administrator also invited some additional persons to serve on this committee. The High School Victory Corps is the plan worked out and is herewith recommended to schools throughout the country by the Policy Committee. The members of this Committee are:

WAR DEPARTMENT

LIEUT. COLONEL HARLEY B. WEST, War Department General Staff, G-5 Division.

MAJOR FRANCIS PARKMAN, Office, Director of Individual Training, Headquarters, Army Air Forces.

NAVY DEPARTMENT

DR. JOSEPH W. BARKER, Special Assistant to the Secretary of the Navy.

LIEUT. COMMANDER MALCOLM P. ALDRICH, representing the Office of the Assistant Secretary for Air, Navy Department.

DEPARTMENT OF COMMERCE

Civil Aeronautics Administration

¹A complete description of the High School Victory Corps is contained in the manual *High School Victory Corps*, available from the U. S. Office of Education, Washington, D. C.

MR. WILLIAM A. M. BURDEN, Special Aviation Assistant to the Secretary of Commerce.

U. S. OFFICE OF EDUCATION WAR-TIME COMMISSION

MISS SELMA M. BORCHARDT, Washington representative of the American Federation of Teachers.

MR. L. H. DENNIS, Executive Secretary, American Vocational Association.

DR. PAUL E. ELICKER, Executive Secretary, National Association of Secondary School Principals.

MR. WILLARD E. GIVENS, Executive Secretary, National Education Association.

CIVILIAN AVIATION

MR. FRANK A. TICHENOR, Chairman of the Aeronautical Advisory Council, Department of Commerce, Publisher of *Aero Digest*.

THE SECONDARY SCHOOLS SHOULD PREPARE YOUTH FOR WAR PRODUCTION
AND ESSENTIAL COMMUNITY SERVICES

The man-power needs of the armed forces are pyramiding. So also are the man-power needs of war production. According to the War Man-power Commission we must have a force of 20,000,000 persons in direct war production and transportation in 1944; we may need 12,000,000 in the fields to harvest 1943's crop. The younger able-bodied males will be in the armed forces. The war-production labor forces must more and more be recruited from girls, women, and older men.

This means that many girls now in the secondary schools should be preparing for industrial occupations and for agriculture. Others should be preparing to take the place of men in stores and offices and in essential community services so important in maintaining health and stability under the stress and strain of war. The secondary schools have a definite responsibility in so far as possible to prepare these girls for the tasks and responsibilities which lie ahead, including those in the home.

A realistic appraisal of our need for trained manpower, both in the armed forces and in war production, makes it evident that the secondary school can't go on doing business as usual. Secondary-school youth are impelled by patriotic considerations to point their training to preparation for war work, to tasks requiring skill of hand and strength of body, coupled with intelligence and devotion. The 28,000 secondary schools of the nation with their 6,500,000 pupils must voluntarily set about the adaptation of their curriculums and of their organization with all possible speed to train youth (and adults, also) to do their part in the victory effort.

WHAT ARE THE FEATURES OF SECONDARY SCHOOLS' WAR-TIME PROGRAM
TO WHICH THE VICTORY CORPS IS RELATED?

All over the country secondary schools are organizing their classroom offerings, their extra-class activities, and their guidance and personnel pro-

grams to further the war effort. Two features of the secondary schools' war-time program to which the Victory Corps is related are: (1) the training of youth for that war service that will come after they leave school; and (2) the active participation of youth in the community's war effort while they are yet in school. The first seems closer to what goes on in school classrooms and shops; the second to the out-of-class activities of pupils. The Victory Corps organization takes account of both.

Whether curriculum or extracurriculum in character, the objectives of the secondary-schools' war-time program which the Victory Corps will foster and promote are:

1. *Guidance into critical services and occupations*: to keep youth currently informed concerning the critical man-power needs of the nation in its armed forces and civilian pursuits; how to prepare for entrance into services or occupations in which critical needs exist; to encourage all pupils to choose wisely some phase of the national war effort to which they can give of themselves immediately.
2. *War-time citizenship*: to strengthen and redirect the required studies in the school curriculum which are basic to citizenship training for American life; in this connection to insure a better understanding of the war, its meaning, progress, and problems.
3. *Physical fitness*: to strengthen and redirect the health and physical training programs so as to make the greatest possible number of secondary-school pupils physically fit.
4. *Military drill*: to provide properly conducted military drill in uniform where possible, for prospective members of the armed forces.
5. *Competence in science and mathematics*: to increase the number of pupils studying science and mathematics courses basic to the war effort and to improve the quality of scholarship in these courses.
6. *Pre-flight training in aeronautics*: to provide special courses and activities for the preliminary training of prospective aviation cadets and ground-crew technicians.
7. *Pre-induction training for critical occupations*: to insure an adequate supply of young people who have some preliminary training for critical war-time occupations in the air forces, the land forces, the naval forces, and in productive civilian life; in connection with the latter to assist in meeting immediate man-power shortages which exist within communities through part-time work-and-school programs.

8. *Community services*: to prepare selected young people for work in essential service occupations of civilian life, including business, home-making, and the professions; in this connection to prepare young people to render immediate volunteer service in civilian defense, care of young children, home nursing, and other service activities requiring some initial training.

PLAN OF ORGANIZATION OF THE VICTORY CORPS

The Victory Corps is proposed as a nation-wide war-time student organization for secondary schools. It is democratic and voluntary in character. Youth are invited to participate as equal partners in the war effort. They are asked to select their areas of special service and to help plan their programs of study and extra-class activity. Secondary schools are given opportunity to affiliate their present student organizations in one great nation-wide organization which will serve to stimulate and channel youth's enthusiasm, by giving recognition for appropriate war services.

Basic for General Membership in the Victory Corps

Any pupil enrolled in a secondary school who, in the judgment of the principal, headmaster, or other designated authority, meets the following simple requirements may be enrolled as a general member of the *Victory Corps*.

1. The pupil should be participating in a school physical-fitness program appropriate to his abilities and needs in the light of his probable contribution to the nation's war effort.
2. The pupil should be studying or have studied school courses appropriate to his age, grade, ability and probable immediate and future usefulness to the nation's war effort.
3. The pupil should be currently participating in at least one important continuing or recurring war-time activity or service of the types indicated in the suggestive list of Victory Corps service activities: Air warden, firewatcher, or other civilian defense activity, USO volunteer activities, Red Cross services, scale model airplane building, participation in health services such as malaria control, farm aid or other part-time employment to meet man-power shortages, and school-home-community services, such as salvage campaigns, care of small children of working mothers, gardening, book collection, and similar services.

Any pupil enrolled in a secondary school may make application for general membership in the Victory Corps by submitting to the principal or other appropriate official of the School Victory Corps an application blank along the following lines:

APPLICATION FOR GENERAL MEMBERSHIP IN THE VICTORY CORPS

Date.....

"I,,

Name

Grade

Age

....., hereby make application for general

School

membership in the Victory Corps. In making this application I pledge myself, if accepted for membership, to strive to be worthy of wearing the general insignia of the Victory Corps. I will efficiently perform any community war services within the limits of my ability and experience; and I will diligently seek to prepare myself for future service in the Armed Forces, in war production or in essential civilian occupations.

"In evidence of my present qualifications for general membership in the Victory Corps I submit the following statement of my program of studies and of my extracurriculum activities and community services related to the Nation's war effort."

Program of Studies**Extracurriculum Activities and****Services Related to the War Effort**

Remarks:

Approved

Parent or Guardian

Approved

Principal or
School Director of Victory Corps

Upon acceptance for general membership in the Victory Corps the pupil shall be privileged to wear the general insignia of the Victory Corps, consisting of an arm-band or chevron of inverted pyramid designs illustrated in the picture next following.

Each secondary school will seek to secure the maximum general membership in the Victory Corps. General membership will have meaning only if it represents active pupil participation in the war effort. School assemblies, rituals of induction into membership, participation in parades, and other community ceremonies are among the means for giving recognition to members of the Victory Corps. In arranging for assemblies and ceremonies the services of members in the armed forces, veterans groups, and community organizations should be solicited.

DIVISIONS OF THE VICTORY CORPS

Pupils who have been accepted for general membership in the Victory Corps may be organized into special service divisions of the Victory Corps

during their last year or two of schooling. In order to provide for some uniformity throughout the Nation in the organization of such special service divisions, *five divisions* will be recognized:

- Air-Service Division
- Land-Service Division
- Sea-Service Division
- Production-Service Division
- Community-Service Division

It must be clearly understood, and clearly explained to the pupils, that qualifications for membership in the land, sea, and air-service divisions are in no sense official requirements for admission to the army, navy, or air services. The qualifications represent simply the general consensus of the National Policy Committee as to what constitutes the most effective preparation for these services within the framework of a secondary-school curriculum.

Air-Service Division

In order to qualify for membership in the Air service division of the Victory Corps the pupils must be planning and have begun preliminary preparation for service in the armed forces as aviation cadets or as aircraft repair and maintenance workers. Evidence of such plans and preparation will be at least three of the following:

- a. Must have pursued or be pursuing a program which includes one year of high-school physics and three years of high-school mathematics.
- b. Must have pursued or be pursuing a course in pre-flight aeronautics.²
- c. Must have pursued or be pursuing a course in automotive mechanics, radio, electricity, or a vocational shop course which gives preliminary preparation for the servicing, maintenance, or repair of aircraft.
- d. Must be participating in a program of physical fitness.
- e. Must be participating in a program of military drill.³ Although it is the intention of the air-service division to concentrate upon preliminary preparation of prospective flying officers and prospective ground-crew maintenance men, other youth whose programs seem definitely pointed to preparation for work in aviation as ground officers ought not be excluded. The potential flying officer should qualify under a, b, d, and if military drill is provided in the secondary school, under e as well. In the case of otherwise qualified seniors, suitable refresher or telescoped courses in mathematics and physics may be substituted for a. The potential aircraft mechanic should qualify under b, c, d, and if military drill is provided in the high school under e as well.

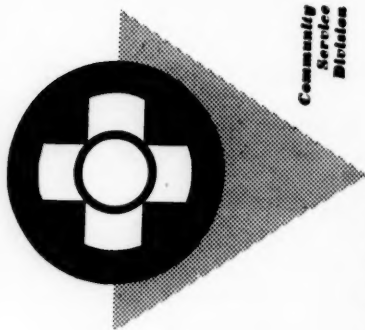
Land-Service Division

Members of the Land-Service Division should be planning and have begun preliminary preparation for service in some branch of the ground forces of

²See U. S. Office of Education Leaflet 63 *Pre-flight Aeronautics in Secondary Schools* for an outline of content for a pre-flight aeronautics course designed for the preliminary preparation of prospective aviation cadets.

³See previous page of this article for statement regarding military drill in secondary schools.

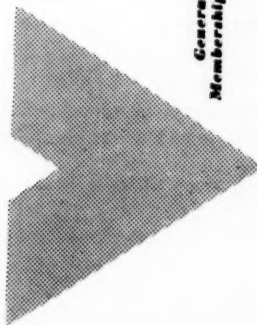
Vermillion Red Navy Blue White



Community
Service
Division



Production
Service
Division

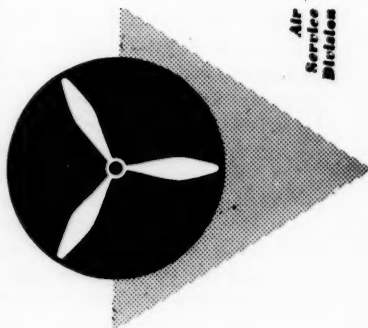


General
Membership

HIGH-SCHOOL VICTORY CORPS INSIGNIA



Sea
Service
Division



Air
Service
Division



Land
Service
Division

the army. Evidence of such plans and preparation will be at least three of the following:

- a. Must have pursued or be pursuing a program which includes at least one year of high-school mathematics, or its equivalent in shop mathematics.¹
- b. Must have pursued or be pursuing a program which includes at least one year of high-school laboratory science, or its equivalent in shop science.
- c. Must be participating in a program of physical fitness.
- d. Must have pursued or be pursuing a program which includes one or more special pre-induction courses.⁴
- e. Must have pursued or be pursuing a program which includes one or more shop courses.
- f. Must be participating in a program of military drill.

Sea-Service Division

Members of the Sea-Service Division should be planning and have begun preliminary preparation for service in some branch of the navy or merchant marine (other than naval aviation). Evidence of such plans and preparation will be at least three of the following:

- a. Must have pursued or be pursuing a program which includes courses in high-school mathematics,⁵ preferably through plane trigonometry.
- b. Must have pursued or be pursuing a program which includes at least one year of high-school laboratory science, preferably elementary physics.
- c. Must be participating in a program of physical fitness.⁶
- d. Must have pursued or be pursuing a course in the elements of navigation.
- e. Must have pursued or be pursuing one or more shop courses.
- f. Must be participating in a program of military drill.

Production-Service Division

Members of the Production-Service Division should be planning and have begun preliminary preparation for service in war industry, agriculture, or other essential civilian productive occupations, as distinguished from service occupations. Evidence of such plans and preparation will be at least three of the following:

- a. Must have pursued or be pursuing a program which includes courses which are definitely pointed to preparation for work in the field of agriculture.
- b. Must have pursued or be pursuing a program which includes courses which are definitely pointed to preparation for work in the field of trades and industry.
- c. Must be participating in a physical-fitness program.⁶
- d. Must have engaged or be engaging in part-time work, either paid or voluntary, in some form of production.
- e. Must be participating in a program of military drill.

Community-Service Division

Members of the Community-Service Division should be planning and have begun preliminary preparation for work in community or other service

¹Required of all members of the Land-Service Division.

⁵Required of all members of the Sea-Service Division.

⁶Required of all members of the Production Service Division.

occupations, such as: teaching, social work, medicine, nursing, dentistry, librarianship, or other professional services; stenographer, typist, bookkeeper, salesman, or other distributive or commercial service; homemaking, child care, home nursing, nutrition, or similar services. Evidence of such plans and preparation will be at least three of the following:

- a. Must have pursued or be pursuing a program which includes courses definitely pointed to preparation for service occupations at the professional level.⁷
- b. Must have pursued or be pursuing a program which includes courses definitely pointed at preparation for commercial, distributive, homemaking, or similar community service occupations to be entered upon leaving the secondary school.
- c. Must be engaging in some form of part-time work, either paid or voluntary, in some form of community service.
- d. Must be participating in a program of physical fitness.⁸
- e. Must be participating in a program of military drill.

INSIGNIA FOR THE CORPS

Insignia for the High School Victory Corps, including its various special service divisions should be worn on a Victory Corps cap of uniform design. The insignia may also be worn on arm bands, upon the front pocket or sleeves or shirts, blouses, or sweaters. Approved positions for wearing the Victory Corps insignia should be uniform for any particular community.

Insignia may be purchased by the schools from commercial firms or made in the school itself or at home. The advantage of purchase is that it will insure uniformity in size, shape, and color of insignia. This insurance may outweigh the slight saving that might result from making the insignia in the school or at home.

The silk-screen stencil process lends itself to the making of arm bands carrying the insignia of the Victory Corps. The insignia might be produced on white cloth, such as felt, cotton, muslin, oil cloth, and the like. In many communities the art departments of the school are equipped with these outfits.

Another method of producing insignia might be to cut them from colored cloth, such as cotton, sateen, or felt. The various parts of the insignia could be separately cut and stitched together. Home-economics departments in some schools may well take the responsibility for directing the making of uniform insignia for the school by this method.

UNIFORMS FOR THE CORPS

It is recognized that a High School Victory Corps in making public appearances may wish to have some further identification than merely the insignia worn on the Victory Corps cap, or on an arm band, or regular school clothing. Due to the shortage of materials for uniforms and the need for conservation, no elaborate uniforms are recommended. It is recommended, however, that the Victory Corps cap be worn on all occasions of public ap-

⁷Courses preparatory for entrance to colleges and universities are included here.

⁸Required for all members of the Community-Service Division.

pearance and as the minimum article of uniform in military drills or parades. If it is desired to present a uniform appearance in parades, in addition to the cap members of the Victory Corps might, in the case of the girls, wear light waists and dark skirts; and, in the case of the boys, wear light shirts and dark trousers.

In case it is decided in any community to provide simple uniforms for members of the Victory Corps, the recommendation of the National Policy Committee is that they should ordinarily be worn only when engaged in drills or special public appearances.

INITIATION OF THE VICTORY CORPS ORGANIZATION

Method of Procedure for Initiating Victory Corps Program

There must be faced the problem of public relations in the establishment of a Victory Corps which seeks to mobilize pupils in the secondary school for war service. The secondary school does not operate in an academic vacuum but in a community setting. Arrangements must be made before initiating the program outlined in this article to secure the support of the Board of Education, community leaders, newspapers, faculty members, and of parents before announcing the program to the pupils themselves. The following suggestions for a method of procedure in initiating the Victory Corps has been prepared.

Assuming the approval of the Board of Education and Superintendent of Schools, the Principal will:

1. Inform the teaching force and community leaders of the program and secure an enthusiastic endorsement and willingness to participate. Establish an advisory group of faculty members and citizens who will co-sponsor the various activities of the Victory Corps. Decide with this advisory group the policies governing acceptance of applications and the awarding of insignia, record keeping, and the mechanics of transferring a pupil from one group to another.
2. Canvass the special abilities of teachers and volunteer community participants for helping with activities in the various curriculum and extracurriculum fields represented in the Victory Corps program.
3. Discuss with teachers and initiate needed curriculum adaptations.
4. Discuss with teachers the means of: obtaining school credit for work experience done outside school hours, modifying graduation requirements, establishing closer working relations with the U. S. Employment office, establishing working relations with the armed forces, and extending the guidance program.
5. Present America's need of trained manpower to the student body.
6. Inform parents through the local press, forums, bulletins, parent organizations, radio programs and other media of the purposes and the program of the Victory Corps.
7. Increase the guidance function of the school by: stressing the part of 9th and 10th grade pupils, the desirability of voluntary services in war effort, and inventorying the abilities, interests, and previous training of pupils of 11th and 12th grades and counseling them in their choice of courses qualifying for membership in special service divisions.

8. Explain available curriculum offerings to the individual pupil and, where desirable, make an immediate change of program.
9. Secure the approval of the changed program from the parents of the pupil.
10. Head up the supervision of the Victory Corps by an over-all director who might be either the principal or some teacher designated by him.
11. Share the control and the direction of the Victory Corps activities with the Student Council or Victory Corps Council of the school.
12. Appoint for each special service division a division counselor to be responsible for the curriculum and extracurriculum program and activities of the division.

VICTORY CORPS COMMUNITY-ADVISORY COMMITTEE

The Victory Corps program in the schools must be an integral part of the wider community war effort. In order to insure the co-ordination of the program of the Victory Corps with the programs of other community agencies, it is suggested that there be organized a Victory Corps Advisory Committee in each community. Some of the more specific purposes might be:

1. To counsel and assist the Superintendent in planning the programs of activities of the High School Victory Corps.
2. Upon request of the Superintendent to assist in providing the volunteer technical leadership to the special service divisions of the Victory Corps.
3. To suggest the use of the Victory Corps members for community war-related service projects of various kinds; and thus to assist in making members of the Victory Corps feel that they are part of a total community war effort.

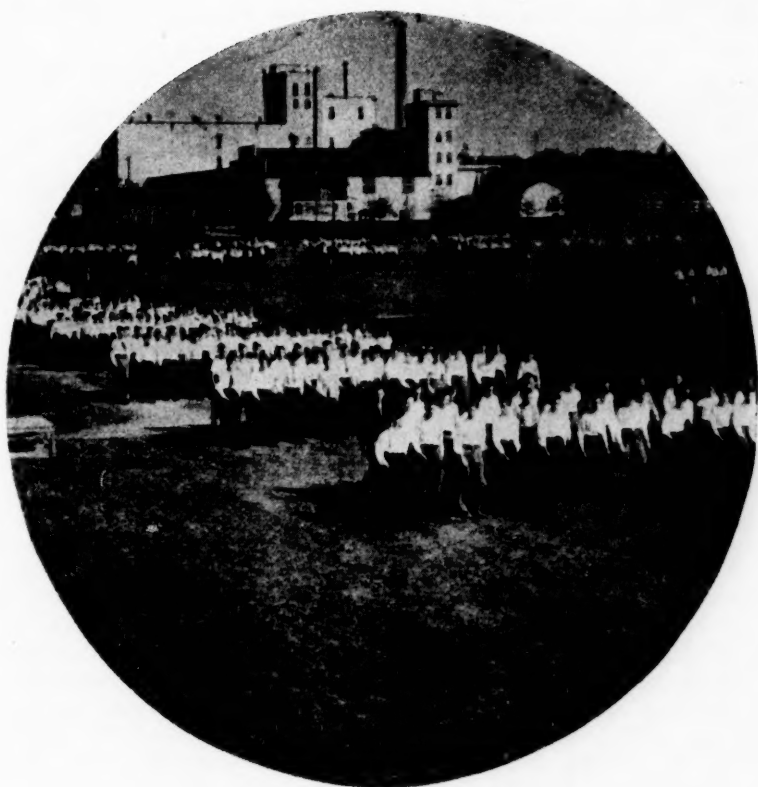
The membership of the Victory Corps Advisory Committee might well include representatives of local defense organizations or committees, such as the Defense Council, Red Cross, Rationing Boards, Salvage Committee, Army, Navy, and the like. Additional representatives might be added of important community, social, business, labor, fraternal, and other interests.

VICTORY CORPS SCHOOL COUNCIL

It is recommended that in the development of the war-service activities of the Victory Corps there be established School Councils representing the school faculty, pupils, and their parents. The present Student Council organizations might be expanded and reorganized as Victory Corps School Councils.

Some of the functions of a School Council might be: 1. To help establish general policies and procedures in the organization and administration of the school Victory Corps and its various activities; 2. To help provide for general supervision of the program of the school's Victory Corps, especially as regards the special service division activities, both curriculum and extra curriculum; and 3. To help secure such needed technical assistance as may be provided by citizens in the community in promoting Victory Corps projects.

In the larger school systems there may be a need for a Victory Corps City-wide Council, with representation from the individual School Councils. This City-wide Council would serve as a general forum and clearing house.



PART II

Wartime Programs in the Schools

Introduction

The Challenge of the Present War Crisis to Secondary Schools

Immediately after our nation entered upon its preparedness program, secondary-school leaders were confronted with this very vital question—What shall be our part in the preparedness program?

Many schools began to give more definite attention to the problem of guiding pupils in those experiences which would deepen their understanding and appreciation of our democratic ideals, our great heritage, and of

what the nature of the steps necessary to preserve and protect our way of life should be. While it is true we were not engaged in the actualities of war, yet the situation facing our country caused the secondary schools to realize the imperative need for facing this problem realistically. The catastrophe of Pearl Harbor brought the schools face to face with challenging questions:

The first question which demands a positive answer is—Shall the schools declare a moratorium on all experimentation with new programs for the duration of the war? To give an affirmative answer to this question would mean two things. For one thing it would mean that the schools would lose whatever gains they had realized in reorganizing the curriculum for the purpose of coming to grips with the social and economic issues confronting youth and society. For another, it would mean that experimentation is sound in principle only in peacetime.

The second question demanding an answer is because of the pressure from certain quarters—Shall the schools stress mathematics and physics at the expense of general education? Let it be granted that the war emphasizes the need for men who are trained in the fields mentioned yet by the time youth received adequate training both in the secondary school and college, it would be too late to be of significant worth to the war efforts. Furthermore, schools would have to decide who should take this specialized training.

A third question is—Shall the schools take advantage of the increased job opportunities for youth to eliminate the non-academic? To give an affirmative answer to this question would imply that the schools were never sincere about universal secondary education and that they were interested only in preparing youth for an age which no longer exists. Furthermore, they would have to admit that the same conditions existed in the schools as when the Federal government found it necessary to set up NYA and CCC programs.

A fourth question which the schools will have to consider is—What use can be made of war problems to provide significant situations for youth? The sugar and tire rationing problems, the tax problems, labor problems, co-operation with our allies, the trend toward internationalism, and the sweeping changes in war methods are illustrations of problems usable for educational purposes. These questions are only suggestive of the many that the schools will have to face and the answers that they give in a positive way will determine their worth both to youth and to our nation in its struggle for survival.

VIRGIL M. HARDIN, *President*
National Association of Secondary-School Principals

September 21, 1942

War-time Programs in Secondary Schools

PAUL E. ELICKER

Within a month after the treacherous attack on America at Pearl Harbor, the Educational Policies Commission issued a statement of war policy for American Education called *A War Policy for American Schools* with this initial paragraph, "When the schools closed on Friday, December 5, they had many purposes and they followed many roads to achieve those purposes. When the schools opened on Monday, December 8, they had one dominant purpose—complete, intelligent, and enthusiastic co-operation in the war effort. The very existence of free schools anywhere in the world depends upon the achievement of that purpose."¹

This War-time Policy for Education was the first authoritative national policy that could guide schools in re-directing the full resources of education from a peace-time program to a vigorous war-time program. This War-time Policy for Education became the sign post for the direction of the full strength of the educational resources toward an early and complete victory. In the War-time Policy for Education, educational priorities were proposed and activities for education of first importance were set forth. There were eleven educational priorities, no one of which could be placed ahead of any other for any particular school.

In April 1942, this Association planned a survey of the war-time activities of secondary schools since December 7, 1941. It addressed several thousand letters of inquiry to a random selection of secondary schools covering every state. The reports from these schools have been summarized and classified according to the educational priorities set up by the Educational Policies Commission in January 1942, supplemented by two other priorities. "Adjusting the School's Curriculum" and "Co-operating with the Community."

No attempt was made to include all the war-time activities of all the schools that reported. All schools engaged in rationing registration, selective service registration, selling and promoting the sale of war stamps and bonds, and salvaging programs. The reports selected for publication were those which it was thought would be of the greatest assistance to secondary-school administrators in converting their educational programs to the war effort this year. Many excellent reports had to be abstracted in order to avoid duplication and to give recognition to many schools that submitted a report of war-time activity. Grateful acknowledgment is given to all schools that co-operated so generously.

This brief report is only partially indicative of the work of the schools in wartime. The extent and diversity of the war-time educational activities are re-assuring of our great potential strength in the preservation of our democracy and American way of life.

¹*A War Policy for American Schools*. Washington, D. C.: Educational Policies Commission, National Education Association, 1201 Sixteenth Street, N. W., p. 3.

How Secondary Schools Are Helping to Win the War

WILLIAM C. REAVIS

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Great changes in the activities of the secondary schools of the United States have been made since war was declared ten months ago. Almost as a unit the schools have responded to the challenge to participate as fully as possible in helping the nation win the war.

Analysis of newspaper clippings and direct reports to the writer from a large number of secondary schools reveal eight types of responses which the schools are making to meet the problems presented by the war.

1. NEW OFFERINGS IN THE PROGRAM OF STUDIES

Many new courses designed specifically to meet defense needs and to provide types of training which are in great demand by war agencies have been added to the secondary-school offerings. Among these additions are courses supplementary to employment in defense industries as skilled and semiskilled workers and courses to prepare out-of-school youth and NYA enrollees for admission to intensive defense training. According to a news release of the United States Office of Education, more than 11,000 schools have participated in providing such courses, and more than 1,600,000 students have benefited.

a. Typical of these new additions to the secondary-school program are the five types of defense courses provided by the Bloom Township High School, Chicago Heights, Illinois:

1. In-school courses, such as vocational classes in machine-tool operation, welding, pattern-making, automobile mechanics, drafting, quantity food production, home nursing. Approximately one-half of all boys in school are enrolled in vocational courses leading directly into defense jobs. Several of these courses are reimbursed under the Smith-Hughes law.

2. Courses in which the National Youth Administration and the school co-operate in a program of production and related training for two hundred out-of-school youths. The facilities of the school and of the new \$86,000 standard NYA work-experience center, located on the school grounds adjacent to the school building, are used for this program. This program is financed in its entirety by the Federal government. Training is given in the following fields: machine-tool operation, arc and gas welding, sheet-metal work, hand forging, radio assembly, power sewing, and gas-engines.

3. Night courses for adults, such as (a) ground school under the auspices of the Civil Aeronautics Administration, in which sixty carefully selected trainees are receiving instruction; (b) fifteen college-level engineering courses enrolling 350 high-school graduates and taught by specialists selected from industry; and (c) supplementary course in machine-tool operation, welding, and blueprint for two hundred men engaged on defense

jobs who desire to "upgrade" themselves. All the expense of operation of these courses is met from Federal funds. Classes meet in the high-school building from 6:00 P.M. to 9:00 P.M. and in the NYA shop from 9 to 3.

4. Saturday-morning apprentice training for twenty-five youths selected by industry for specialized training leading to supervisory responsibilities. Half of the expense is met by Smith-Hughes appropriations.

Examples of recent additions to the curriculum are:

b. A new course in the Bulkeley High School, Hartford, Connecticut, designed to prepare young men for the apprenticeship school conducted by the Pratt and Whitney Aircraft Corporation, in which specialized training is provided for junior executive and supervisory positions.

c. A course in foods for Senior boys, a course in home nursing for Senior girls, and first-aid courses leading to the Red Cross first-aid certificate, in the George Rogers Clark School, Hammond, Indiana.

d. Courses in Spanish, history of Latin America, radio, economics, conservation of natural resources, and consumers' education in the La Salle-Peru Township High School and Junior College, La Salle, Illinois.

e. A course for air pilots, which has already produced twenty-seven licensed pilots, in the Thornton Township High School and Junior College, Harvey, Illinois.

2. SHIFT OF EMPHASIS IN ESTABLISHED COURSES

The large-scale participation of teachers and pupils in war activities has created problems which are projected into the regular classroom work to such an extent that a shift in emphasis has inevitably resulted. Examples are:

a. In chemistry, the nature of chemical warfare and the means of combating it (East High School, Aurora, Illinois).

b. In physics, greater consideration given to electricity and aeronautics (Senior High Schools of Hannibal, Missouri, and Whiting, Indiana).

c. In industrial arts, the construction of games for the use of men in the military camps (New Trier Township High School, Winnetka, Illinois).

d. In hygiene, health maintenance and diet (Senior High School, Hannibal, Missouri).

e. In social studies, sensible discussion of world affairs (Senior High School, Hannibal, Missouri).

f. In physiology, first aid and home nursing (Lyons Township High School and Junior College, La Grange, Illinois).

3. SPEEDING UP INSTRUCTION

Whether leaders in secondary education believe in acceleration or not they have been strongly urged by the American Council on Education to speed up the education of pupils of ability so that these promising persons may be graduated from college before they are called by the Selective Service

Act. Many secondary-school and college boys are leaving school to enlist in the armed forces or to take jobs at good salaries.

The following are types of speeding-up which are being attempted.

a. Bulkeley High School, Hartford, Connecticut, in order to encourage high-ranking Juniors to enter college at the end of the Junior year so that they may complete their college education before they reach the draft age, offers to award such Juniors their secondary-school diplomas after they have satisfactorily completed their first year's work in college. Seniors who leave at the end of three and a half years to volunteer in the armed services are awarded their secondary-school diplomas at the time of withdrawal.

b. George Rogers Clark School, Hammond, Indiana, reports that, in anticipation of changes in college courses the administration and faculty "have begun to bear down especially in college-preparatory courses so that the pupils can enter college at an earlier date without having missed any work."

c. Genoa Township High School, Genoa, Illinois, reported that, rather than hold school on Saturdays in order to close last year a few weeks early, pupils who needed to miss some days of school or to leave school early in the spring for farm or factory work were permitted, in advance of absence, to "make up" the work to be missed.

d. Glenbard Township High School, Glen Ellyn, Illinois, excused after May 1 Seniors, in particular, who were doing good work and who could establish the fact that they had jobs in essential industries or on farms.

e. New York City high schools as a step toward speeding the graduation of pupils, particularly those who plan to enter college, are authorized to return to a former practice of permitting pupils who obtain an average of 75 per cent in their studies to carry five instead of the customary four major subjects.

4. WIDER USE OF THE SCHOOL BY THE COMMUNITY

The active participation in war activities has created new demands on secondary schools for the wider use of school facilities. A few additional examples will serve to emphasize the importance of the part being played by secondary schools in the total war program:

a. In the Whiting Senior High School, Whiting, Indiana, machine shops are operating on a twenty-four-hour basis.

b. At the Bulkeley High School, Hartford, Connecticut, the machine shop is used by NYA youths from 3:00 P.M. to 6:00 P.M. and by adults from 7:00 P.M. to 10:00 P.M., all being engaged in defense training.

c. Pupils of the George Rogers Clark School, Hammond, Indiana, who have completed the required subjects for graduation and whose classes can be scheduled during morning hours are allowed and encouraged to take defense training in the afternoon or evening at Technical Vocational School.

d. At Fort Dodge, Iowa, the high-school building has been opened to

all kinds of night classes for adults including first-aid classes. The school is helping to support public-forum programs in the building.

e. At Genoa Township High School, Genoa, Illinois, the farm shop may be used by local farmers for repair work.

f. At Las Vegas, Nevada, the high school building is used for Red Cross, Women's Ambulance Corps, Civil Aeronautics Administration ground school, athletics for soldiers, nutrition classes, and other defense classes.

g. Federal defense engineering classes and other Federal defense classes are conducted after regular school hours in the La Salle-Peru Township High School and Junior College, La Salle, Illinois. During the summer vacation these classes met both during the day and during the evening.

5. LOCAL PROTECTIVE MEASURES PROMOTED THROUGH THE SCHOOLS

In assuming a responsibility for the protection of the community, the school may be regarded by some persons as accepting an entirely new role. However, such is not the case, since the school has frequently led the community in movements to safeguard the public welfare. The participation of the school in the war program has merely enlarged its protective activities.

Reports from widely scattered secondary schools reveal that the pupils and the faculty members are prepared to render protective services, such as extinguishing fires, rendering first aid, doing home nursing, preparing air-raid shelters, giving training in health maintenance and diet, performing life-saving services, working toward conservation of resources, and the like.

6. CONTRIBUTING TO THE MAINTENANCE OF SCHOOL AND HOME MORALE

The secondary school in most communities reaches more homes in a direct and intimate way than does any other social institution. The youth who attends the school brings to the members of his family the currents of thought and the attitudes of mind of the school head and faculty. If these thoughts and attitudes are wholesome and sound, the influence on the members of the family is stabilizing and uplifting. Thus the school contributes to the maintenance of home morale.

The nature of the contribution of the secondary schools toward the maintenance of morale in wartime is aptly illustrated by practices such as the following:

a. In La Porte, Indiana, the all-school committee on defense has issued a list of suggestions to indicate to teachers in each department of the secondary schools how they may most effectively co-operate with the total war effort. It is hoped that the indirect effect of these suggestions on school and home morale will be constructive and wholesome. The following list of eighteen suggestions was prepared for the social-studies department.

1. Stimulate lively discussions of current events.

2. Develop a thorough understanding of the nature of democracy—its origins, history, achievements, problems, and values.

3. Teach the importance of hemispheric solidarity.
4. Help pupils to see and feel their part in this national emergency.
5. Make certain that there is a "participating citizenship" and democracy in action in each classroom and in the school system.
6. Stress respect and love for national emblems and instill patriotism.
7. Develop a spirit of co-operation, tolerance, and a willingness to sacrifice in the interest of the common good.
8. Continue to teach the basic principles and facts of American history, government, and geography.
9. Show how democracy betters other forms of government.
10. Teach the dangers to democracy from without and within.
11. Teach the problems of organizing industrial and economic resources for defense.
12. Teach the importance of conservation of our natural resources.
13. Teach pupils the importance of getting reliable information in order that they may not be upset by idle or malicious propaganda.
14. Teach pupils to anticipate what post-war problems are likely to confront us.
15. Emphasize in instruction the development of proper attitudes and techniques of learning as well as factual information.
16. Provide opportunities for training in effective techniques of group discussion, group criticism, and group decision.
17. Teach the issues and aims of the war.
18. Provide opportunities to stress the courage and fortitude of our forefathers against much greater odds.

7. CONTRIBUTING TO THE MAINTENANCE OF SOLDIER MORALE

There is scarcely a secondary school that does not have its honor roll of members who participated in the World War in 1917-18.

The pupils can and should do more for their associates and for the alumni than merely keeping records. They should give cheer and encouragement to their fighters in the trenches, on the seas, and in the air. A mere listing of appropriate activities which are being carried on very generally in secondary schools is sufficient to indicate the positive contribution which pupils in secondary schools can make to soldier morale:

- a. Writing letters to local members of the American forces.
- b. Sending the school paper to all alumni members in the war.
- c. Remembering these alumni with occasional school souvenirs.
- d. Contributing magazines and books for the use of service men.
- e. Entertaining soldiers in local camps under proper sponsorship.
- f. Giving appropriate publicity to the valorous deeds of local alumni.

8. PARTICIPATION OF PUPILS IN GENERAL DEFENSE ACTIVITIES

The following selected examples reveal the extent of pupil participation in the general defense activities now being carried on in secondary schools.

a. The Community High School, St. Charles, Illinois, has adopted the following eight-point program:

1. Campaign of conservation—paper, metal, etc.
2. Weekly period for sale of defense stamps.
3. Required physical-fitness classes for all boys.
4. Red Cross home-nursing classes for all junior and senior girls.
5. Evening school classes in physical fitness for all men out of school.
6. Evening school classes in home nursing.
7. Assembly speakers on the issues in the war.
8. Musical organizations assisting in community morale programs.

b. In the Township High School, Antioch, Illinois, the pupils buy defense stamps at the school office; collect paper, collect scrap iron (14,335 pounds to date), zinc, tin, brass, butter cartons, license plates, razor blades, paste tubes, old batteries, fruit-jar covers (zinc), and cartridge shells.

c. The Senior High School, Hannibal, Missouri, has organized many of its defense services under the extracurriculum program. The following statements illustrate how the plan is carried out:

1. Student council co-operates with defense-stamp sale each Tuesday.
2. Honor Society sponsored formation of Junior Red Cross in school.
3. Junior Red Cross co-operated in Victory Book Campaign.
4. Boys' pep club to collect defense waste material—paper, metal, etc.
5. Student council co-operated with citizenship waste drive.
6. Student council co-operated with old car license collection.

CONCLUSION

School traditions and customs should not be allowed to stand in the way of wholehearted participation in new activities and practices which can be shown to contribute to the realization of the nation's objectives. In so doing, the schools may find not only that the services rendered are of major importance as a war effort but also that the quality of education received by the pupils has thereby been definitely improved.

Secondary Education in Wartime A State Program

WARREN W. KNOX

Director of the Division of Secondary Education, Albany, New York

America is engaged in total war. The efforts of every citizen and every institution must be directed toward winning the war and, as the President has indicated, winning the peace to follow. When we were attacked, we were not fully prepared and certainly not on the alert. The military consequences are clearly such as to indicate that the cost of complacency is fearful. For all America, the lesson is clear; for the nation's schools, inextricably involved in total war, the implications are peculiarly pertinent. Never again in the course of this world catastrophe can alertness be relaxed.

In our schools alertness and vigilance call for action and demand an appraisal of educational assets and liabilities in the light of defense needs. Vigorous, relentless scrutiny of educational policy is required. But, at a time when drastic shifts are being made in social and economic arrangements, schools must be safeguarded against ill-conceived changes in structure and curriculum.

The student bodies of American public schools represent our largest and potentially our greatest reservoir of strength. A second great store of strength, immediately available for local and national war effort, is the loyal and highly trained body of school officials and teachers now giving leadership to the educational program. Vast resources of school plants are already being used in connection with defense and are sufficiently extensive as to insure quarters for an increasing number of defense activities. Of all public institutions the school is best equipped to play a major role in building morale and in creating efficient and united efforts to deal with the task at hand.

ACHIEVEMENTS TO DATE

Established to assure an enlightened and intelligent citizenry capable of functioning democratically, our school program is probably the greatest single force contributing to the preservation and defense of America. Much of the preparation necessary for total defense has already been carried on effectively by our schools. In the past, American schools have made invaluable contributions to the national war endeavors. By providing a basic education program for all, through citizenship training and through instructing youth in specialized occupational areas, our schools have functioned in times of peace in such a way as to make possible capitalization of unlimited human resources in times of war.

Present military-training programs in all branches of the army and navy and related air services are based upon a foundation furnished in public

schools. Conferences held with military authorities have served to emphasize the importance of the foundation furnished by the regular secondary-school program, particularly in connection with instruction in English, social studies, mathematics, and science.

On the basis of co-operation between state and local administrative authorities there have been developed procedures for making even more effective the regular secondary program. With the advent of war those new developments are of particular significance. Some of them may well be enumerated:

1. Through a complete re-organization of social studies our citizenship-training program has been greatly improved. Widespread provision for educating pupils in community living, more adequate instruction in the important field of geography, increasingly effective instruction in areas of patriotism and citizenship, added stress upon world history and international relations—particularly with respect to Latin America—and greater emphasis upon American history and problems, are main characteristics of this new program. Fortunately the introduction of this new program is well underway in our schools.

2. In the area of patriotism and national morale schools in recent years have been making vital contributions through school services of many kinds. The present program to promote the sale of defense-savings stamps is an example. Throughout the state, school plays and pageants have dramatized important events in the history of our country. Bulletins and instructional materials on the Bill of Rights and the Constitution have been prepared and effectively put to use in schools of the state.

3. A carefully planned program for the improvement of reading has been carried on. In this connection testing and instructional materials have been developed so that this vitally important aspect of the school program may be strengthened.

4. Guidance programs have been strengthened and now play an increasingly important part in developing well-adjusted individuals capable of standing the stress which accelerated national activity brings.

5. With the financial assistance of the NYA, schools have developed and supervised a work program which has now become an integral part of secondary schooling. Through the leadership furnished in the field of business education, programs of part-time work have been provided in co-operation with business employers. The possibilities in this area have not yet been fully explored.

6. The vocational departments in co-operation with the state have developed emergency programs in training for the defense industries. Long-range programs of many kinds in preparation for the fields of agriculture and industry are under way.

7. Through adult education, community recreational projects and sponsorship or support of a multitude of community organizations, direct contributions are being made by schools to the strengthening of democracy. Through sharing with pupils certain administrative responsibilities in connection with pupil activities of various kinds many schools are now helping pupils "learn the ways of democracy" at first hand.

AN EXAMPLE OF BASIC EDUCATIONAL REQUIREMENTS

In order to obtain accurate information and expert judgment of expe-

rienced military training authorities, relative to the basic educational requirements of the various branches of the military service, especially in the field of aviation, the department has, through proper military channels, contacted and visited responsible authorities in Washington and especially the Commanding Officers and Instructional Staffs of the Army and Navy schools, where military aviators, engineers, and other specialists in the service are trained.

The schools visited were recommended for visitation by the Commanding Officer of the Army Recruiting Center in New York City, as being not only typical, but outstanding schools of their kind. With authority furnished by the Commanding General of the Second Corps Area, Mr. Francis E. Almstead of The Education Department visited seven schools.

There are in the United States Army thirteen major divisions of service. The schools selected for visitation seemed to be of most interest and to furnish the most valuable leads that might be obtained in relation to the secondary-school program. There are nearly 100 specialized courses open to the enlisted men in the regular army. It was not possible to make a thoroughgoing investigation of each of these programs, although data were obtained in relation to most courses. Because of the increasing importance of the air service, major attention was centered on the Army Air Schools.

In order that the Education Department might obtain information which would be of assistance in advising schools concerning the organization of the secondary-school curriculum so as best to contribute to the national war effort, the investigation was concerned with the educational program of the military training schools, the educational requirements regarded as a necessary background in preparation for such training program, the judgment of experienced army staffs as to existing weaknesses or defects in secondary schooling as preparation for military training, suggestions for the improvement of secondary schooling and recommendations in regard to the steps that might be taken to improve the basic educational program of the secondary school as it relates to the military services.

Mr. Almstead visited the schools, held interviews with the instructors and commanding officers, gathered courses of study including illustrative and problem materials of all kinds, discussed educational requirements, and obtained other valuable data.

A summary outline of the major suggestions for the improvement of the present secondary-school program made by the training authorities in the army schools visited may be presented as follows:

1. It was recommended that, while assembly programs and extracurriculum activities of the secondary school have high educative values, these activities should not be scheduled in lieu of and should not interfere with the regular instructional program of the school that is carried on in the classroom.

2. It was recommended that, throughout the secondary school, good study habits and habits of neatness, accuracy, self-reliance, and integrity of personal effort should be developed.

3. Military training and military uniforming of any kind should not be encouraged in the secondary school. The already existing enthusiasm of boys for aviation and for various branches of the military service should be used as a stimulus in programming fundamental courses in mathematics and science throughout the secondary-school period.

4. In addition to the skills and habits previously mentioned, recommendations in regard to skills or such matters that should be emphasized or included in secondary-school courses may be outlined as follows:

ENGLISH:—Clear, correct, and concise oral and written expression; reading ability; practice in filling out application forms; and reporting laboratory experiments.

SOCIAL STUDIES:—Positive teaching of democracy; emphasis on duties and responsibilities, as well as privileges of citizenship; proper concepts of spherical earth surfaces; the use of the globe in teaching earth concepts and distances; latitude and longitude; meridians and parallels; map reading; knowledge of natural resources, their location and importance; distance in terms of land, water, and air transportation routes, including time factors; world history backgrounds; American history and government, with emphasis upon American achievements, heroes, and ideals; and the understanding of international problems.

MATHEMATICS:—A thorough knowledge of and skill in using arithmetic; algebra through quadratics, with the use of practical illustrative and problem materials; plane geometry with practical illustrative and problem materials and with emphasis upon accurate drawings; and spherical trigonometry, to be added to advanced mathematics, with illustrative and problem materials taken from the fields of aviation and industry, as well as other important fields.

GENERAL SCIENCE:—Neat and accurate drawings and well-written science notebooks should be required; emphasis should be placed on water analysis, first aid, latitude and longitude, meridians and parallels, time—solar system—and contour maps; giving attention to distance, English and metric units, regular and curved time-distance scales; direction involving the compass, magnetic north, declination (local magnetic attraction), astronomy, including stars and planets and some constellations; orientation (map reading); emphasis upon arithmetic applied to general science materials; and elementary photography and mechanics.

BIOLOGY:—Freehand and scale drawings and carefully prepared laboratory notebooks should be stressed as well as physiology and hygiene topics, including first aid.

PHYSICS:—Skills in the use of the slide rule, logarithm tables, and drawing of scales (including micrometer and vernier scales) should be developed during the physics course. Topics that need special emphasis and attention include magnetic-compass-direction, declination, earth magnetism, local effects, azimuth, polar and rectangular co-ordinates, weather, vector analysis, photographic principles (lens and principles of light), air masses, atmosphere, temperature and density, measurement (absolute units), forces including balanced and unbalanced, hydrostatics, hydrodynamics, work, energy, power, friction, thermometry and calorimetry, heat transfer involving atmosphere

and gas laws and change of state, hydrometry, internal combustion engines, elements of aerodynamics (T-M 1-205, 1-206), meteorology (T-M 1-230), and direct and alternating current principles.

CHEMISTRY:—The emphasis might well be placed on drawings, blueprint making, water analysis, applications of mathematics to the field of chemistry (quantitative relationships, the gas laws, chemical problems), general formulae of the methane and benzene series (important halogen and other derivatives of the principal members of the two series); writing and balancing of equations, neutralization, normal and molar solutions, and simple indicators.

RADIO:—The New York State course of study, as published, has full army and navy approval.

Inefficiency Must Be Eliminated

Without sacrificing gains that have been made as a result of experimentation we must consolidate those gains and put to immediate use those practices which through experimentation and experience we have found to be most efficient. This is a time when random experimentation in our schools should be suspended. Experimentation must continue, but it must have a legitimate purpose and must be carefully planned.

The administration of our schools must be such that a sound program in education is carried on efficiently and economically. Small classes in subjects of questionable value must be eliminated. Special groups, of twenty-five or thirty, working on a supervised study basis, may well be organized in order that needs of a few exceptional pupils may be met. The procedure of organizing small classes for repeaters should generally be discontinued. Special teachers may often be shared by communities.

Plans must be made immediately for the elimination of wasteful practices. A large number of schools still retain mid-year promotions in spite of their high cost and inefficiency. Substantial savings in school-bus mileage can in many cases be made by a revision of routes and schedules. Careful study of class schedules can often result in increased efficiency of the school plant.

Our Program in Mathematics Must Be Strengthened

Mathematics constitutes an integral part of the foundation upon which much military training rests and must be made available to an increasing number of secondary-school pupils. In a letter to the Commissioner from the Navy Department, Washington, D. C., signed by Randall Jacobs, Rear Admiral, U. S. Navy, the importance of mathematics and science in the high school curriculum was stressed as basic preparation for service in the Navy.

Boys in secondary schools who are capable of profiting from a study of mathematics should be encouraged to elect algebra, geometry, and trigonometry. These are the mathematics courses suggested by Army and Navy authorities as preparation for various branches of the military service. Many

boys should also be encouraged to study solid geometry. There is no lack of competent teachers of these subjects in our secondary schools. Furthermore, military authorities have indicated most positively that they are not interested in applied mathematics courses but rather the regular courses which stress the fundamentals. The regular courses in elementary algebra, plane geometry, intermediate algebra as organized in state-syllabus fulfill the requirements.

Our Science Program Must Be Improved and Extended

This is of particular importance in those areas so vital to the national effort, such as physiology, bacteriology, nutrition, hygiene, fire prevention, meteorology, and in other vital topics included in general science at the lower secondary-school level and in general biology in the senior high school. Our courses in physics and chemistry need to be similarly reorganized with a more thoroughgoing instruction in those topics which are most significant in training for war industries and military service. The alert teacher will recognize in airplane spotting an opportunity to teach much regarding the physics of light and sound. The chemistry of the incendiary bomb and of detonants should be considered. There is also opportunity for the teaching of much basic science in connection with the preparation for civilian defense.

The science program must also be extended to include new courses required by the national war effort. Courses in radio communications, photography, and possibly navigation should be prepared and introduced in schools at the earliest possible moment. Many science teachers in our secondary schools have had excellent training in these fields and many have had actual experience in teaching such work.

All Areas of the Curriculum Can Contribute to the National Effort

Secondary schools must take immediate steps to strengthen those areas of the curriculum that contribute directly to patriotism and intelligent citizenship. In this direction, the introduction of the new social studies program must continue and be encouraged in every possible manner. The business education program in our secondary schools should be able to prepare effectively both boys and girls for clerical and secretarial functions in connection with business administration of our national effort in either civilian or military service. Our practical arts and our vocational programs should be extended and reorganized with respect to training our youth as well as our adult population for service in fields of agriculture and industry. The magnificent work already done by schools offering vocational courses to full-time pupils and part-time groups is an achievement. In the home economics field conservation of food and clothing, home nursing, and nursery care may well be stressed.

In industrial arts, instruction in maintaining and repairing home equipment of all kinds should release skilled labor for more important tasks.

Courses in agriculture and home gardening should be particularly helpful in relation to our food problems. Courses in automobile and airplane mechanics assume increased importance. Related directly to morale, and particularly to its recreational aspects, is the fine arts program. Music and art have important contributions to make and we cannot afford to neglect these fields. It goes without saying that a community which lacks an adequate health and physical education program and attendant social services cannot adequately prepare youth for the rigors of military life or for the physical strain which intensive participation in the defense program will bring. Much attention must be given to strengthening the health program. Now is not the time to stress winning basketball teams at the expense of over-all participation in sports. Nor is it the time to develop sports while disregarding such important problems as nutrition and general health service.

The General Tone of Secondary-School Work Must Be Made More Purposeful and Serious

Through careful guidance, both of the educational and career type, school programs for the individual pupil must be planned with respect to the requirements of the community and nation as well as with respect to needs and welfare of the individual. Furthermore, good study and work habits must be emphasized and re-emphasized in order to instill a discipline and a morale so necessary for preservation of our civilization. In order to take full advantage of the opportunities for providing the best possible training for the national emergency it may be necessary to offer certain courses for less than a full semester or for less than five periods each week. Such special courses should be planned so as to take full advantage of the school plant and personnel.

There is no reason why secondary-school pupils should not follow the example of defense industries in making more efficient use of their time and increasing the number of their working hours. In many cases pupils should carry five subjects instead of four. On the basis of actual investigation there is no evidence that the addition of an extra subject to a pupil's program has any appreciable effect upon achievement. Responsibility of our schools for the safety of our children is paramount. Schools must take leadership in protecting pupils from possible dangers of war. Special instruction in first aid and in the handling of various types of emergencies should be available to boys as well as girls. Full and complete co-operation of the schools with civil defense authorities must obtain.

School and Community Must Be Brought into Closer Co-operation

Schools differ widely in this area of community service. Some schools endeavor to provide a complete program of educational, recreational, and social service activities for people of all ages in the community. Others feel that

their obligation is discharged when they have subjected pupils to classroom instruction in a formalized academic program.

Neither of these extremes should exist, but every school has a function of community leadership to perform and many school systems in the state have been discharging that function well. For example, under school leadership, calendars of community activities have been drawn up with the school serving as a clearing-house for community organizations. In this way, overlapping among organizational programs has been eliminated. Other schools have established programs of adult education, so that citizens can learn new skills and acquire new understandings. Saturday and after-school recreational programs have been organized for in-school and out-of-school youths as well as for adults. In isolated areas the school serves as the community motion picture theater—a service which may grow in importance as the present emergency continues. In some areas schools have established local health councils, drawing upon lay organizations, local doctors, and health officials, as well as upon school personnel such as the nurse, physical director, home-making teacher, attendance officer, and guidance director. Such councils recognize that a community will have an incomplete or poorly integrated health program unless individuals and groups concerned with the program co-operate to make it work effectively.

In still other areas, usually in connection with a senior high school social studies program, job opportunity surveys have been made. When under school leadership, comprehensive social surveys are initiated, communities are better equipped to meet obligations of the defense effort. Much educational material relating immediately to the defense job is being published. This material is already available to libraries and can be made readily available to citizens where library facilities exist. Here again the school can offer assistance. Working closely together, school and community can obviously contribute much to defense. The school is the logical agency to take the initiative in coordinating the educational, recreational, and defense activities of the community. Finally, it should be re-emphasized that the schools must preserve the heritage and strengthen the convictions, the faith, and the spirit of the youth who are soon to assume full citizenship responsibility and upon whom largely rests the future of America.

Planning a Youth War-time Program on a State Basis

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Secondary-school principals throughout the state of Utah have been keenly interested in the development of a workable and effective program for the youth of their state. While each principal gave attention to youth problems as they arose within his own school, he, likewise, was aware of the fact that most of these problems were not local. They require the adoption of some general policy and the entire co-operative assistance of all within the state, laymen as well as schoolmen, if the best interests of not only the youth themselves but also the state and nation are to be served. As a result youth conferences were held jointly with school and non-school agencies in an effort to make a careful and thorough study of this problem and to develop some tentative principles of procedures. As a result of this effort, a small committee brought together some general recommendations and principles which were unanimously adopted by the following agencies within the state: schools, National Youth Administration, Farm Bureau, CCC, churches, employers, labor, social services—juvenile courts, U. S. Employment Service for Utah, WPA, clubs that impinge on youth, 4-H—extension service, and FFA.

A STATEMENT OF POLICY

The following essential areas and assumptions basic to a youth program were set up as a general philosophy.

1. Youth must be trained in the American way of life—to know and love America, its ideology and traditions, and be eager to carry them on at all costs.
2. Training in the fundamental skills of reading, writing, speaking, and figuring must be adequate to meet the vocational level each attains, and for all pupils there must be training in civic responsibility and in a culture which makes life rich, and meaningful, and worthy of a democratic society.
3. The program should provide for the training in health habits, for remedying such common physical defects as now weaken our general population, and for physical development through adequate activities and competition for all youth.
4. It is the right and duty of every individual to be vocationally trained adequately to earn a wholesome, honest living. Such training should be kept as close to the job and as near the time of employment as possible to the end that each boy and girl shall be trained by the time he or she leaves his training provision. This training should be of the nature of work itself so that each trainee has sufficient work experience to carry on—on the job—when he leaves the source of his training. The school's responsibility in vocational

training is to make sure that pupils have work experience, either by co-operating with employment or by complete training in the school itself.

5. Training in the wholesome use of leisure is necessary for an enduring culture, and must be provided for all.

6. Ethical and religious life is basic to an enduring civilization and should be a part of each individual's training. We believe ethics is best taught as part of a religious ideology and would encourage each church to care for the religious training of its own members. It becomes the function of the school to teach the value and importance of religion.

7. As the nation's all-out war effort progresses, it may be necessary in some areas to recruit young people not ordinarily in the agricultural labor force for assistance in harvesting the crops. In all such cases their recruitment for agricultural work needs to be so planned as to assure safeguards for their education. Policies for the employment of young workers should be developed with full regard to laws on child labor and school attendance and to safeguards necessary to protect the health and well-being of these young workers and the continuity of their education.

In recruiting young people from school when a real need for agricultural workers has been found to exist—

Youth sixteen years of age and older should be engaged before children aged fourteen and fifteen are called upon. The schools should make every effort to develop programs that will wisely dovetail school activities with agricultural work and will result in no curtailment of school terms.

Children fourteen and fifteen years of age should not be released from school nor their school programs modified unless it is found that the need for farm labor is an essential one and cannot be met in any other practicable way. In such case adjustment in school attendance and programs should be arranged to interfere as little as possible with normal school opportunities and progress.

School work and home duties should constitute the only work activities of children under fourteen years of age; and such children should not be employed in agriculture outside the home farm.

When young workers are placed in agricultural work, provision should be made for safeguarding their health and welfare through reasonable hours of work; wages at not less than established prevailing rates; safe and suitable transportation where needed; and, for those living away from home to be near their work, provision of fully adequate housing accommodations, supervision, medical care, and leisure-time activities.

The representatives of these agencies further agreed:

1. It is a major responsibility of American society to develop a long-range comprehensive youth program in which the needs of youth and the needs of

society will be governing factors. This should be accomplished in local, state, and Federal activities co-ordinated to develop youth.

2. The needs of youth of which public institutions and agencies should be more cognizant may be summarized in six areas:

- a. Opportunity for a continuing education (to grow)
- b. Opportunity for adequate training for vocational efficiency (to train)
- c. Opportunity to work and to earn an American standard of living (to work)
- d. Opportunity for a normal social life (to live)
- e. Opportunity to serve society in some desirable, useful way (to serve)
- f. Opportunity to receive continuous guidance in lines of educational, vocational, and civic life (to develop under guidance)

3. The organization of the youth program should be non-political and should provide for a maximum of local responsibility, direction, and participation, with financial assistance, stimulation, and co-ordination from the state and Federal government. Such a plan should prevent institutions, agencies, and bureaus from building up their own organs at youth's expense.

4. It is recognized that the principal objectives of the present youth agencies are fundamentally sound and that these objectives should be included in any program designed to serve youth.

5. The establishment of a program for youth should be such as to promote unity and co-ordination and avoid needless duplication and waste.

MEANS WHEREBY THESE OBJECTIVES MAY BE OBTAINED

In order that these conferences might result in a definite assistance to those concerned, suggestions were developed in six areas which will serve as guides and procedures. Conclusions were drawn up by the committee on six specific areas: (1) citizenship and human relations, (2) health, (3) fundamental skills of communication, (4) vocational efficiency, (5) appropriate use of leisure, and (6) ethical and religious life. These areas have been described many times by important national committees. They in turn relate to our present-day conditions and if properly and effectively carried forward will promote the school's all-out war program.

1. *Citizenship and Human Relations*

1. Social studies be taught each year in secondary schools
2. That classes studying American life be encouraged among adults
3. That classes in Americanism be encouraged among laborer and workman—partly on and off the job
4. That classes of appropriate citizenship be made available in all training camps, wherever men and women meet regularly together. The social studies program in Utah secondary schools at present is: Seventh grade—Utah Geography and History; Eighth grade—United States History; Ninth Grade—Community Civics; Tenth Grade—World History; Eleventh Grade

—The American Civilization and Government; and Twelfth Grade—Problems in American Life. The classes in the social studies for youth and/or adults ought to emphasize the American tradition in such areas as:

- a. The intrinsic worth of human beings
- b. The inalienable rights of **all** men and their responsibility to society
- c. The American traditions affecting war and peace
- d. The nobility and desirability of work as a human assignment and opportunity, whether it be in shop, in office, on the farm, or in the forest
- e. Freedom from class barriers and rejection of titles of nobility
- f. Universal and free education as far as we can benefit by it
- g. Christian morality and sentiment
- h. The sanctity of a contract
- i. The dignity and honor and responsibility of public service
- j. Private ownership of property
- k. The relation of small group loyalties to national life

5. The courses ought to be closely tied to the thoughtful study of the following American state papers:

- a. The Mayflower Compact
- b. The Bill of Rights and the Petition of Rights
- c. The Declaration of Independence
- d. Our first Treaty of Peace
- e. The Constitution of the United States and our state and certain of the Federalist Papers as indicative of our Colonial heritage
- f. Washington's Farewell Address
- g. Lincoln's Gettysburg Address
- h. Lincoln's Second Inaugural
- i. Wilson's Fourteen Points
- j. The Four Freedoms as expressed by President Franklin D. Roosevelt
- k. The Atlantic Charter, Roosevelt and Churchill
- l. Etc.

II. *A Health Program for All Youth*

1. Periodic, comprehensive examinations required of all. Only by being made conscious of needs will we seek remedies. In lieu of this periodic (yearly) examination, there should be a policy of screening out pupils continuously and sending such pupils for examinations whenever in the judgment of their teachers such an examination is needed.

2. Records of all such health examinations should be filed in the high-school building and be kept for both in- and out-of-school youth of the high-school area. The record making and preserving is quite as important as the examination. It is vitally necessary to record case histories of illnesses, immunizations, and the like. If the examinations are made at the doctor's office, pertinent facts should be supplied and recorded at the school.

3. Following such examinations, the doctor, parents, and the health teachers should confer, going over the findings of the examination and plan-

ning a health program in the light of revealed needs. Programs of immunization should follow such meetings where needed. Likewise, programs of remedial service such as in orthopedics, diets, and visual helps should develop from such a conference.

4. Classes taught in health education in secondary schools should train pupils in a sane program of safety education in relation to their own problems in their own community. This instruction should include how to avoid accidents and what to do and what not to do in treating emergency cases.

5. Pupils in health classes should be given adequate training in developing an objective attitude toward both the source of health information and the information itself. They should come to regard life as sacred, and health as an heritage to be protected and extended. They should gain through their studies such a discipline and practice in self-control as to make many of our prohibitions and injunctions unheard of because unnecessary.

6. Social relationships (boy and girl relationships), preparation for marriage, elimination of the social diseases, become the chief center of interest in the lives of youth. The instruction should be based upon the problems of the group, and developed in such a way that it helps them to adequate solutions.

7. The secondary school has a major responsibility toward the mental health and personality development of youth. Every teacher should be alert—every department plays its part. The health and physical education department is in a strategic position to make great contributions in this field through games, play, sports, and rhythemics.

8. Pupils should be given such a variety of games and activities that their energies shall be properly and adequately directed and motivated and they shall be habituated to the practices and dispositions of true sportsmanship. Further, secondary-school pupils should be given abundant opportunity for planning, organizing, and directing games for others, for children and for adults, that they can take the leadership in worthy leisure-time utilization.

9. The organization of physical activities among youth should look to a year-round planning, be so planned and administered that youth is not exploited and that all are encouraged to participate in those fields of activities needful and appropriate for their enjoyment and health. (Grand-stand participating to receive only its fair share of attention, which should be much less than at present.)

III. *Training in the Fundamental Skills of Communication*

"Life is more than meat, and the body more than raiment." That which gives color, meaning, and purpose to life grows out of our associations with others and our abilities to communicate. It is no verbalism that the printed page is the great storehouse of the ages from which each generation gathers insight and wisdom, and into which the best of each generation is emptied.

Knowledge of numbers, similarly, is basic to any expanding civilization. To evaluate, to appraise, to compute, to count, are so much a part of each person's experience, that training in numbers seems as necessary to a civilized being as food and shelter. All teachers must teach the vocabulary of their fields; must teach pupils to read, to write, to evaluate, to have common insights within the fields of study in which they have training.

IV. *Vocational Efficiency*

1. Full-time employment is the right and duty of every employable person, planned in such a way that all may work.
2. Every child ought to have sufficient manual work experience that he shall attain some degree of skill with tools, (but more important, that he also attain a decent appreciation for the skilled workman.)
3. Education for work should be extremely broad. It should, as far as possible, include elementary training in molding, carving, weaving, ceramics, concrete, masonry, stone cutting, carpentry, metal work—copper, cold metal, tin work, leather work, electric work, aviation, auto mechanics, welding, machine shop, and radio. It should include care and use of tools. It should hold to high standards of attainment. It should be progressively more difficult and should progressively approach adult working conditions.
4. The school, the community, and industry must co-operate closely, making it possible for pupils while yet in school to secure work training and experience on the job. This can be done in several ways. The following are illustrative:
 - a. The schools must make their program and the organization of courses of studies sufficiently flexible that pupils may enter and leave school as school-experience and work-experience needs require.
 - b. The schools should continue their instruction at the most opportune time for the learner. The school experience and the work experience should synchronize to each other to the advantage of the learners and the needs of society. This looks forward to a year-round schedule of school-work planning.
 - c. Pupils can be organized into teams or relays so that two or more may hold one job, thus efficient work experience results and school training continues.
 - d. At certain seasons of agricultural or industrial stress, school programs may be modified so that large groups of pupils may be taken from school for labor. In such arrangements the schools should make it possible for pupils to move consistently from school to work and back again with ease and assurance. In this way they may continue their education without the common evil of "make-up work" missed while out of school. In this way there should be no indiscriminate exploitation of children in the labor market, and at the same time the employment values and work experience may be enhanced and properly utilized.
 - e. The in-school training and the out-of-school work-experience should supplement and enrich each other.

5. Schools should keep records of the out-of-school work experience of the pupils and these records should be given careful study by the teachers in counseling and planning the pupils' educational programs. Hide-bound systems of credits may well give way to this newer system of education.
6. In summary, this in- and out-of-school training program has two very definite purposes to accomplish: (1) to articulate or bridge or unite the total training experience of the pupil so that school training and after-school work shall be made as profitable as possible, (2) that each pupil as he matures is trained to earn a living, and has had a satisfactory work experience before leaving his training institution.

V. *Appropriate Use of Leisure*

Leisure is here described rather generally as that part of one's time not now demanded of his work and the requirements of mere sustenance. Our day is divided into parts: part one may be thought of as the time given over to earning our living; part two, as the time necessarily given to sleeping, eating, and such activities necessary to maintenance; part three, the balance of one's time, which might be called leisure. How can one best use such time? What are the appropriate uses? Here again certain principles are applicable:

1. The time should be used to conserve, to recreate, to rebuild—not to dissipate one's health or energy
2. One's behavior during leisure should not be against the general welfare of the society of which he is a part
3. The activities of leisure ought to contribute to the general positive morale of the individual and group
4. Man is a purposive being; the activities of leisure ought to carry forward his more enduring purposes

VI. *Ethical and Religious Life*

Youth is a time of deep religious emotion. Most of the great leaders of religion began their ministry during this period. Every great civilization has in its beginnings manifested intense religious fervor, and the downfall of many followed their disconversion. This group recognizes the important part the church as an institution has to play in an enduring culture. It proposes that representatives of the church sit in council with any youth-planning movement, that the churches give careful study to the spiritual needs of youth and take the leadership in satisfying such needs. Schools, homes, the press, and other similar educative agencies have their specialized functions to perform but stand by to offer support and encouragement to the church. Nevertheless, the churches must perform a great leadership movement in the realm of spiritual values if youth is to receive the training so badly needed.

War-time Adaptations in Occupational Information and Guidance Service A State Program

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The basic principles of a functional guidance program do not change even in wartime. Following the call to conserve manpower it becomes more important, not less, for schools to stress the individual inventory. In times of lush job opportunities it is just as essential to the individual's welfare to possess needed occupational information about a prospective job as during depression periods. When personal plans have to be subjugated in the interest of winning the war, when many normal outlets are blocked, the importance of providing adequate services for individual counseling cannot be overlooked. Placement is now far more than just finding a job—any job. The individual must think of his place either presently or ultimately in the armed services or in some defense industry. The multitude of training opportunities which a school-leaver faces presents a need for guidance in all of its aspects. Follow-up is more important than ever. Data thus derived should be used as a partial basis for curriculum modifications and as a guide in rendering further help to those who have already left the school and in effective counseling.

Although the basic principles of guidance remain the same, the war does necessitate a re-emphasis along certain lines. Established trends are disrupted. New opportunities open up; old ones disappear. The State Department of Public Instruction through the Occupational Information and Guidance Service is attempting to render the kind of service best adapted to the demands of guidance programs functioning during the stress of war. A few specific projects undertaken during 1942 are outlined.

1. Counseling About Problems Affected by the War

In co-operation with the Division of Instructional Service, a plan was sent to each of the 960 secondary-school principals containing, "Suggestions for Finding Out the More Important Questions and Problems Influenced by the War Which Are Faced by High-School Seniors." This plan was tried out experimentally in a city high school, a small town high school, and three rural high schools. From these try-outs it was found that seniors were very much concerned about future plans and how the war is affecting them. They were

¹A detailed account of this plan appeared in an article, "The Significance of Current Problems and Questions of High School Seniors as Related to the Curriculum," *High School Journal*, May 1942, pp. 221-225.

also desirous of help through individual conferences based upon accurate information and intelligent advice concerning their plans.

2. *Counseling Youth in the Emergency*

In March there was released a bulletin containing briefs of eighteen selected articles appearing in *Occupations* magazines from October 1940, to January 1942. Titles of a few of these articles are: "New Defense Personnel Techniques," "Occupational Information Through School Subjects," "Army Occupations," "Each Soldier in the Right Place—A Description of the Army Personnel System," and "Occupations Included in the Defense Vocational Training Program." Over 1700 copies of this release were distributed to secondary schools, NYA resident centers, and employment service offices. Much of the information in these articles has a direct bearing on questions turned up later through use of the plan outlined in number 1.

3. *Sources of Free and Inexpensive Guidance Material*¹

A list containing eighty sources of free and inexpensive guidance items was sent to each secondary-school principal during the spring. The list had been revised through March 1942, and contained references to a number of titles related to the national defense training program and other war efforts affecting a guidance program.

4. *Engineers Are Needed*

The U. S. Office of Education sent to each secondary school in the United States in April a bulletin, *Engineers are Needed*, designed to improve the process of guidance and selection of engineering freshmen. In order to attempt to measure the effectiveness and usefulness of this document, the State Department of Public Instruction sent a letter and questionnaire to a selected list of some 385 secondary-school principals in the state asking if the material had been used and of what value it had been. Approximately one-third of the replies were returned. They indicated for the most part that little had been done about using the suggestions in the bulletin because of receiving the material near the closing of school and the fact that the schools were then engaged in sugar and gas rationing. While this effort to evaluate the use of one bulletin turned up a pessimistic outlook, it is only on the basis of such efforts that improved policies can be made regarding material sent out to schools by state and Federal agencies.

¹State Department of Public Instruction, Occupational Information and Guidance Service, Raleigh, N. C., State Guidance Bulletin Number 12.

The War-time Program in Kansas City Public Secondary Schools

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The war-time program of education in the public secondary schools of Kansas City probably can be best characterized by saying that there has been a re-set in it rather than an upset of it. A conscious effort has been made to avoid hysteria on the part of all concerned—pupils, patrons, and teaching staff. There has been no wholesale throwing-out of the old or bringing-in of the new simply because of war. Realizing that certain values are enduring and that these are the rightful possession of all generations despite temporary upheavals, the basic framework of the secondary-school program has been held intact, while such modifications have been included as give vital point to the program in terms of existing conditions and conditions likely to exist following the coming of peace. Modifications relate to the subject matter content of, and teaching methods in, existing courses in the curriculum; inclusion of new courses in the curriculum; co-operation with community and governmental agencies; broadened extracurriculum activities; and administrative policy. Brief indications of some of these modifications follow.

MODIFICATIONS IN EXISTING COURSES

The reading of newspaper and magazine articles has been intensified in English classes. Articles dealing with the war have received particular emphasis and these have been utilized as the basis for training in written and oral expression. Pupils have been encouraged to listen critically to radio programs, forums, and lectures on war-time subjects as a part of their instruction in English classes. Enrollment in Spanish courses has increased materially and the instruction is concerned more and more with peoples of the Spanish-speaking countries of the western hemisphere. Practical applications of mathematics and science to war-time production and military effort have received great impetus. In the field of the social studies the impact of war has resulted in greater interest, appreciation, and vitalization.

In the industrial arts department, the effect of the war is vividly reflected. Enrollment is at maximum capacity. During the latter half of last year, pupils devoted themselves almost exclusively to efforts born of wartimes. Older boys have been encouraged to specialize along lines of their greatest interests such as pattern making, welding, sheet metal work, lathe operation, airplane and machine design, and topographic map making. Many of them have found positions in essential war-production efforts. Classes have produced quantities of ash trays, games, lamps, smoking stands, and other articles for

the Red Cross, and have completed one thousand scale model airplanes for Naval Aviation Training Centers.

Girls in the homemaking classes have received special instruction in nutrition and the production of commodities essential in wartime. Much of their work has centered around needs of the Red Cross and Civilian Defense. Nursing, home care of the sick, war-time budgeting, and related topics have received increased attention due to the war.

In the physical education classes of all secondary schools, activities have been directed to the end of securing improved mental and physical health and the creation of habits and attitudes favorable to the perpetuation of these. A standard course in first aid was included in practically all physical education classes. Other departments have co-operated with physical education teachers in building the program of physical fitness.

NEW COURSES INTRODUCED

Whereas the greatest war-time change in the Kansas City secondary curriculum has been by way of redirected emphasis in established courses, a few new courses are being introduced. The inclusion of a standard first aid course has been mentioned. In addition to this, a half-unit course in Pan-Americanism, offered on an experimental basis last year, is included as a regular offering in the first semester of 1942-43. It is contemplated that this course will be followed by a half-unit course in Far-East Problems during the second semester. Another new offering being included in the curriculum is a course in aeronautics. It will be open to junior and senior boys and girls, and will be credited as a unit in science. Preliminary enrollment in the course is large. An experimental course in this subject was offered in the 1942 summer session for secondary pupils. This proved to be popular and profitable.

COMMUNITY CO-OPERATION

Co-operation of the Kansas City public secondary schools with community and governmental agencies has been complete and mutually beneficial. Various departmental classes, student councils, extracurriculum clubs, and individual pupils and teachers have worked together to contribute innumerable articles to the Junior Red Cross. Patrons, pupils, and teachers worked faithfully on sugar rationing, and have given aid to local draft boards. The collecting of waste paper, tin foil and scrap materials has become a regular habit in all of the schools, as has the purchase of war stamps and bonds. Plans for the participation of pupils and teachers with the Community War Chest Fund organization for the current year are well under way. Help has been extended to the State Department of Education in its effort to gather information pertinent to the prosecution of the war. Teachers have volunteered for and are participating in the local program for civilian defense. Air-raid pre-

cautions have been studied in all schools and organizations and plans for air raids have been perfected. Regular drills have been followed.

To a greater extent than ever before pupils are being brought into a realization of the meaning of democracy. By precept and example an understanding and appreciation of democracy is being built into the consciousness of the pupils. In English and social studies classes particularly, basic principles are being studied. Materials for this purpose are being carefully selected for inclusion in the curriculum. In classrooms and in extracurriculum organizations democratic procedures are being followed in greater degree than has been common previously. Democratic administrative procedures characterize the entire school system at the present time and lend encouragement to such practices in classrooms.

TRAINING WORKERS FOR WAR INDUSTRIES

Of greatest immediate significance in the present war effort is the work going forward under the organization for vocational and defense training. Under provisions of the Smith-Hughes and George Deen Acts, Kansas City is operating two vocational secondary schools, one for white and one for negro pupils. In these two institutions training is being given in some twenty trades and occupations, many of which prepare pupils for efficient participation in war industries. Regular day-time courses of a trade-preparatory nature are offered to the pupils working for a secondary-school diploma. In evening classes for adults, courses of a trade extension nature are offered. These courses are for the purpose of refreshing and extending occupational skills.

Under provisions for defense training an intensive program is operating in three different centers in Kansas City. In this program, short-term job training is the objective. Training is largely for workers in the metals trades—machine, tool operators, welders, and aircraft sheet metal workers. A course to train men and women for jobs in glider building is of recent origin. Women receive training in three distinct skills and men in a wider variety of skills. Another course, the first of its kind in the nation, also is of recent origin. This course develops skills in topographic map making. It is open to men and women and runs eight hours per day, six days a week, for a period of three weeks.

For the use of the local Red Cross unit, pupils in vocational and defense, training classes have constructed on a trailer chassis, a Red Cross canteen, fully equipped for rapid feeding of groups in emergencies. The canteen carries gas, cooking equipment, a refrigeration unit, and other accessories necessary for emergency feeding. Arrangements have been completed with all large downtown motor dealers to couple the canteen to trucks for delivery to points of emergency at any time of day or night. Canvas cover is provided so that as many as two hundred fifty persons at a time may be fed under cover.

The Schools Report Their War-time Activities

P. E. ELICKER and W. E. HESS

I. TRAINING WORKERS FOR WAR INDUSTRIES AND SERVICES

G. C. CARPENTER, SUPERINTENDENT

Union High School, Downey, California

The loud concussion which boomed around the world waking up the pre-occupied and divided democratic processes of the United States when the Oriental landgrabbers swooped down and deposited lethal calling cards for a visit at Pearl Harbor December 7, was somewhat slow in waking up the busy people of Downey and its Los Angeles County vicinity. But somewhat later, when an awe-inspiring and frightful anti-aircraft display showered shrapnel at elusive airplanes reconnoitering in the Southern California dawn, Downey, as well as the rest of the world, knew that America was in it, that it was time to wake up, and that all public institutions would have to carry on with an "all out" program in order that democracy and the free way of life might survive.

"All Out" has now become the policy of the Downey Union Junior-Senior High School. The Board of Education here sanctions it, the public here approves it, and the entire student body and members of the faculty are bending every effort to see that the policy is carried out. This viewpoint is well expressed by the author to his faculty members, "We must go overboard if need be in our all-out defense program, because the schools can play a leading and vital role in winning this war. We should not even consider expenses because if we save democracy, it will be well worth the expenditures, and if we lose democracy, we shall have no need to worry about costs."

FEDERAL DEFENSE CLASSES

Alert early to the part that the United States would be playing later on in the war effort, the author negotiated for a Federal Defense School, which was established in Downey the same month Federal funds were made available to the people of California. The National Defense Training Program was established by Act of Congress in June, 1940. This Act provided funds to be used for the pre-employment workers for defense industries and for the upgrading of workers already employed. Funds are allotted by the United States Office of Education to the Vocational Education Division of the various State Departments of Education. From these funds local school districts are reimbursed for the cost of conducting National Defense Training classes.

These funds became available in California on July 1, 1940, and, according to the director of the school, "The first classes were started late in the same month. First classes established were of supplemental or trade extension nature, primarily for employees of the Vultee Aircraft plant located here, and were held in the high school and junior high school classrooms." Later, separate quarters were established for the program. Training facilities

of the school now consist of completely equipped shops for machine work, sheet metal, aircraft riveting and assembly, heat treating laboratory, marine arc welding, aircraft mechanics, and a small foundry. These are completely equipped with the finest and most modern machinery and tools, and are now used twenty-four hours a day for pre-employment and supplemental training of war workers. So rapidly has this program grown, that the present enrollment is in the neighborhood of eleven hundred students, about seventy-five per cent of whom are enrolled for supplemental or trade extension instruction, the balance being enrolled in pre-employment classes.

The program of the defense-training school is divided in two parts: (a) pre-employment workers (day and night) and (b) for upgrading of workers already employed. The courses included in the pre-employment program are: aircraft arc welding, marine arc welding, aircraft acetylene welding, machine shop, drill press operation, marine sheet metal, aircraft sheet metal, aircraft riveting and assembly, aircraft installation, mechanics, and radio and electrical assembly. A number of these courses are open to both male and female. Courses included in the program for upgrading workers already employed are: acetylene welding, shop math, aircraft arc welding, aircraft hydraulics, aircraft mechanics, blueprint reading, heat treating and metallurgy, machine shop major tool design, small tool design, template layout, tool grinding, design sketching, and aircraft inspection.

ADULT EDUCATION PROGRAM

With all possible assistance rendered to the cause of the war effort in a practical and immediate sense, this booming secondary-school system enlarged its scope to give added service to its district by establishing for the first time a separate evening high school with a program designed to meet the adult educational needs, especially for the present emergency.

Training for defense of the civilian population highlights the present courses of study. Approximately 1500 adults are attending classes which are made up largely of air-raid wardens, auxiliary police, and first aid instructors. Whereas the struggling adult education program which was previously sponsored as part of the regular secondary-school program had a low attendance and served but few interests, the separate evening program and its public-spirited program immediately grew to such proportions that accommodations many times were critical. Now, it is a rare member of this community indeed who is not taking or has not taken one or more classes at the school. The information secured is designed to lessen confusion, pain, and death when civilian emergencies may arise.

AN ASSURED JOB FOR THE GRADUATE

But all this time the pupils of the high school were not being deprived of an opportunity to serve their country during their school days while pre-

paring for service after graduation. Boys with capabilities and interests were allowed to enroll in riveting and welding at the Defense School. The classes are limited to boys who will be eighteen years old, either before graduation or soon after. This means that these boys will have two years in a defense industry before they are called to take up arms for their country. At the same time, these pupils were allowed school credit for this training which leads to a diploma at the end of the senior year. Arrangements are now being made to open this same opportunity of a job with a diploma to the girls.

MORALE OF THE REGULAR STUDENTS

Woven within this pattern of "all out" training for the emergency, the general morale of the student body is being consciously built to a high level so that a keen understanding and appreciation of what it means to live in a free world might be fostered. Here is where the extracurriculum activities have proved useful. Each club has taken stock of its aims and purposes, and any service that it can render, however minute it might seem, is encouraged. Paper drives, sponsored by the Parent Teachers Association and carried on by the student body, have been the most lucrative. Lackadaisical attitudes toward such drives were prodded when the competitive element entered into the picture, when the service to the country was pointed out, and when publicity was given winning teams.

Specific instances of how school clubs have contributed materially and spiritually to the cause are interesting. The importance of maintaining good health, now as never before, is stressed by the Girls' Athletic Association. Body-building exercises are entered into with a new spirit by the girls. How to have plenty to eat and still keep the school-girl figure is shown by an orientation into the field of dietetics. This field is dealt with to a greater extent, however, in the foods classes of the regular curriculum. The GAA also sponsors Red Cross first-aid classes, the training which can be used in the home and during war emergencies, as well as on the camping trip when such pleasures are once again resumed.

The Tri-groups this year sponsored a fag-bag drive as part of the National Forestry efforts to prevent fires. Materials for the bags were deposited in large laundry sacks hanging in conspicuous locations in the corridors, and this material was made into little bags by the sewing classes. These are to be given to each person who travels through sections of the country where a danger of fires may exist. Cigaretts are to be placed within, thus removing temptation from smokers who might carelessly cast away the stub that might cause havoc.

Means of conversing with persons of any nationality in the world are being learned by the newly created Esperanto Club. The small group, which

is becoming larger each meeting, studies syntax and vocabulary with much more zeal than could be mustered for the same study of Latin.

Interpretation of the part that the school is playing in the war effort is attempted by the school weekly newspaper. Publicity for all clubs and their drives is given by student-written articles which are oftentimes illustrated with halftones. Bolstering and maintaining of morale is also taken care of through the feature pages. Here human interest items dwell upon the sidelights of student war work and here editorials point out the patriotic meaning of the school's part in national defense.

Downey's student body, through its Executive Board, was one of the first in the nation to invest money in war stamps. In all, \$200 have been added to the cause from student funds. This action was one of the first moves made by the school after the Pearl Harbor episode.

Other contributions to the war effort may prove of interest. Clerical help for the local Chamber of Commerce and the Selective Service Board is supplied by a corps of aids from the commercial department. Entertainment for blackout periods is on hand when needed, a project undertaken by the local dramatic club. Each boy, a former pupil or a recent one, who enters Uncle Sam's service, will be represented by a star on a service flag maintained by Les Torchères, girls' service organization.

With several army barracks adjacent to the campus and the school gymnasium but recently emptied of soldiers, library classes initiated a drive for magazines and books for men in the service. The pupils felt that if the soldiers were given something to read in their off hours their morale would be maintained on a high level.

In order to make the pupils more aware of the present war situation and to stimulate buying of war stamps and bonds, the *Quill and Scroll*, international honorary society for secondary-school journalists, sponsored a war slogan campaign. Some of the winning slogans were: "Know Secret, Tell All—Japs Hear, We Fall," "Be Saps, Open Yaps, Help Japs," "It Ain't no Sin to Bomb Berlin," and "Yank Tanks Mean Jap Taps." Already many of the slogans compiled by this group are appearing on posters and showcards around the community soliciting adult contributions to war drives sponsored by the school.



When the Federal government first instituted its defense program, more than a year ago, many of the secondary schools were in a position to develop new courses immediately or extend their existing courses, whereby retraining facilities were available to the public. In the reports from the schools that have been received by the Association relative to their war-time education program, a large group of schools have sent complete descriptions of their program.

Specific examples of a few of these schools are illustrative of what hundreds of secondary schools throughout the United States are doing.

EXAMPLES OF ACTIVITIES

1. The four types of defense classes that are offered at the Taylor Allderdice High School in Pittsburgh, Pennsylvania, are aviation, machine shop, electric welding, and working plastics, as well as the regular work. The aviation course has enrolled about one hundred pupils who have been selected for the semester. Instruction is given by a qualified pilot. The course also includes some elementary meteorology. Another twenty-five boys who volunteered are being given special training in messenger service.—R. G. Deever, Principal.

2. When the call went out for trained industrial workers for vital defense industries, the District's vocational schools began to hum night and day teaching the vital crafts to new students and refreshing others with some previous experience. Increased offerings in Spanish and Portuguese were made available to the army and others as events overseas forced closer welding of inter-American ties.—Washington, D. C., Public Secondary Schools.

3. Both boys and girls of senior standing in the George Washington High School in Indianapolis, Indiana, were given an opportunity last spring to receive instruction in metal trades, industrial training, and machine operation. About twenty students responded to this opportunity and learned enough to help make them useful employees in some defense industry after graduation.—W. G. Gingery, Principal.

4. Senior boys of Daytona Beach Seabreeze High School in Florida enrolled in defense courses such as welding, blue printing and reading, drafting, automobile mechanics, and aircraft motors. Evening classes in defense work were established during after-school hours. Likewise, the building was used for nine weeks in the summer as a vocational summer school to train vocational teachers.—R. J. Longstreet, Principal.

5. Defense-training courses in the Simon Gratz High School in Philadelphia, Pennsylvania, include mechanical art shops, drawing, and radio construction and maintenance. The increase in opportunity for employment in the drafting room resulted in establishing a course in tracing and blue-printing for girls. About one hundred girls of the senior class were enrolled in class last year. In addition many of the defense-training classes continued after the regular school hour. As a result many seniors have enrolled in these after-school-hour classes in addition to regular school work. Following completion many of the pupils have been placed in war industries.—E. C. Werner, Principal.

6. The Union High School of Escondido, California, has a class in aircraft sheet-metal work in addition to the regular school program. During the past three years more than six hundred persons, eighteen years of age or over, were trained and placed in employment. The effectiveness of the program has been due to highly skilled instructors in classes of sheet metal, truck and tractor operations and repair, carpentry, and welding. In addition to the regular courses the school has credit for the authorship of two books by the program supervisors, *Aircraft Instruments*, published by McGraw-Hill Company, and *Aircraft Sheet Metal Workers' Manual*, published by Goodheart-Willcox Company.—M. W. Perry, Superintendent.

7. The Albuquerque High School in New Mexico set about to reorganize the training program from a peace-time basis to meet the war production training without interfering with or neglecting the regular school-training program. Additional classes were set up in the school shop at all hours of the day and night, fully equipped with hand tools specifically to train production workers and machine workers in short-term courses. Classes were conducted in aircraft mechanics, electric arc welding, and machine shop practice. Courses were also developed or modified to fit trained workers for employment in the aircraft and allied manufacturing industries requiring skilled machine operators. Aside from the regular vocational program, this school now operates a full day and night war-time program of twenty classes in the following fields: machine tool operations, aircraft engines, aviation mechanics, electric arc welding, aircraft acetylene welding, aircraft sheet-metal work, and aircraft riveting. Since the beginning of the defense training, a total of 1658 men have registered for training. Of this number, 705 completed their training, 450 reported directly to the school of having obtained employment in the defense industry for which they trained, 270 are unreported to date, 508 are listed as transfers, withdrawals, or otherwise discontinued, and 530 is the present active enrollment. This school also has what is termed "The American Women's Voluntary Services," which is open to adult women and those of high school age. Besides these services it includes a variety of courses for war work for which women may be trained. They include courses for nursing, truck or ambulance driving, office work, messenger service, and air-raid wardens.—G. O. Ream, Principal.

8. The McKinley High School in Canton, Ohio, now offers shop work for girls. A group of senior girls watched their older brothers leave jobs in industry and go off to army camps. After December 7 they decided that someone would have to take these places in order to keep the factory wheels turning. They circulated a petition and presented it to the board of education. The board decided to approve the course and appointed an instructor for it. Since the girls that wanted the course were already engaged in other

activities, they took the course after school time. The group was divided into three classes, two of which met two evenings a week from four until six and the third group met on Saturdays. Of the sixty girls who entered the course in February, forty-five completed it. According to a certification card given each girl at the close of the term, techniques acquired included "mechanical drawing, blueprint reading, filing gauging (A. W. G., dial and micrometer calipers), soldering, taps, dies, drill press, grinder, lathe, electrical assembly, and electrical testing." Now that they have completed their course they are ready and eager for real jobs—and several plants in the vicinity have shown an interest in them. The Hoover Company of North Canton has interviewed most of them, and Republic Steel Corporation has indicated its desire to try some of them in the drafting room. At this time the principal obstacle in their way is the age limit on factory jobs. Many of the girls have not yet reached eighteen.—J. H. Mason, Principal.

9. The high school in Spartanburg, South Carolina, offered to co-operate with the state and Federal governments in training workers for war industries. Through its vocational department the high school has offered a variety of courses designed to fit workers for jobs in industries essential to the national defense. In the last two years the following courses have been made available: woodwork, drafting, electricity, auto mechanics, acetylene and electric arc welding, loom-fixing, sheet-metal work, ship-fitter helper, and machine-tool operation. Since this program began several hundred men between the ages of eighteen and sixty-two have been given training. A majority of these people are now employed in local textile plants, ship yards, munitions factories, and aircraft plants. After December 7, 1941, the local training program increased its schedule of hours until now a twenty-four hour day is observed, five days a week. At present approximately one hundred and fifty men are trained every eight weeks and it is probable that this rate will be maintained until the need for war workers is over.—T. F. Wright, Director of Vocational Education.

10. The Lee Edwards High School in Asheville, North Carolina, has been doing defense work for over a year. This work consists of three types of instruction. Shops for defense training in machine shop, welding, sheet metal and aircraft sheet metal, and riveting. Since starting the work the school has trained more than four hundred people for essential defense employment. Practically all of these trainees have been employed in some phase of war work. The classes of instruction run an average of 480 hours. In addition the defense classes of the NYA have courses in machine shop, sheet metal, and armature winding. From this source some four hundred students have gone into defense industries. These classes are conducted in eight hour shifts and run on a twenty-four hour schedule, five days a week.

The third type of work consists of classes in machine-shop practice, welding, and sheet metal. Students as a rule take these classes as part of their secondary school and vocational work, but not less than twenty per cent of them have used it as preliminary training for entering defense industries. Upon completion they have either gone directly into defense service, or are now supplementing that training by entering the regular defense classes.—Beulah R. Coffman, Assistant Principal.

11. The high school in Joplin, Missouri, has conducted classes in the fields of machine, machine operators, tool making, acetylene welding, electric welding, blacksmithing, heat treating, aircraft sheet metal, power sewing, radio, auto mechanics, pattern making, cabinet work, jig building, drafting and design, explosives, general metals, and form building and framing. In this program, an average of fourteen per cent of the total enrolled trainees have entered war-production industries each month. The shop-training techniques in this program are conducted on a highly individualized instructional process based upon an analysis of the basic skills to be learned, and the basic related knowledge necessary to operate adequately the specific machine or do a specific job. When these basic skills have been mastered, the trainee is ready for defense employment. Trainees from the various shops are located in major machine, aircraft, construction, and ship-building industries in the nation. While many trainees are employed some distance from Joplin, a large number are working in local plants and local ordnance plants. Both groups are thus doing their bit to win the war.—R. V. Baker, Director of Vocational Training.

12. Central High School in Chattanooga, Tennessee, offers courses in repair work, mechanical drawing, and blueprint making. The work of the mechanical-drawing department also includes lettering of several types, orthographic projection, isometric and geometrical drawing, perspective intersections and development, sketching, sectioning, revolutions, structural drawing, map-making, scale drawing, and sheet-metal drawing. Pupils of this department working in the drafting field are numbered by the hundreds. The demand for them at the present is so great that the call cannot be met. The pupils of the mechanical-drawing department acquire such knowledge as is universally needed in structural, scale, sheet-metal, and map drawing. This knowledge is of specified value to the war-construction program.—S. E. Nelson, Principal.

13. The high school in Hobbs, New Mexico, has courses in airplane mechanics and training given in co-operation with the local airport. Seniors have been allowed to take these courses and are given credit toward graduation. Courses for radio and radio repair are especially given for adult groups by members of the school faculty.—T. C. Bird, Principal.

14. Fryeburg Academy in Fryeburg, Maine, established a night school for men in tractor, truck, automobile repair, and metal work which includes welding.—A. N. Berry, Principal.

15. The high school of Okmulgee, Oklahoma, is sponsoring national defense work in teaching aircraft sheet metal and electric welding.—W. Max Chambers, Superintendent.

16. Many of the seniors of Sewanhaka High School, Floral Park, New York, are enrolled in the Sperry Gyroscope Company junior defense course each afternoon after the regular school day. These boys are trained for war work in the Sperry plant which is located a short distance from this school. In the adult defense program, this school has trained approximately 2,000 men in two years to take responsible positions in aircraft plants. Two hundred and twenty-five women are enrolled in courses.—A. T. Stanforth, Principal.

17. The high school of Longview, Texas, has given attention to training people to enter industry and the air service.—R. L. Speight, Principal.

18. The West Senior High School of Columbus, Ohio, has a committee comprised of five instructors of adults in civilian defense basic training. The metal shop runs three shifts daily during the vacation months, in addition to its regular night program which has been operating during the past two years. The program of the day high school offers a variety of vocational courses definitely related to preparing workers for war-time industrial production.—H. H. Reighley, Principal.

19. The Senior High School in Tucson, Arizona in 1939 introduced courses in general metals; the next year an additional instructor was added, and courses, even at that time, began to parallel those offered in areas where men were training for work in shipyards, airplane factories, and munitions plants. In 1941 a third instructor came into the department, which by this time had been given increased floor space, additional machinery, and other essential equipment. The boys taking this work were able with little additional training to step into defense factories. The first regular national defense class was started in April, 1941. This work increased until the shop was running 24 hours daily—the day shift for enrolled secondary-school pupils, and the "swing and graveyard" shifts for men and women in the community who desired such instruction as welding, aircraft sheet metal, and machine shop. During the summer of 1942 the shop was used the entire 24 hours daily for national defense trainees.

During the school year modifications were made in the science and mathematics programs to help meet the needs of defense industries and the armed services. During the present school year, new courses in radio, astronomy and cartography, aeronautics, and adaptation of courses in ad-

vanced mathematics and physics have been made to fit into the requests of the various branches of the military services, particularly the air corps.

For many years Tucson Senior High School has had daily classes in military training. This department is adequately housed and fully equipped with the additional advantage of an indoor rifle range for target practice. The course includes soldierly compounds, discipline, instruction in care and nomenclature of the rifles, drill, and lectures on military sciences and tactics. The high-school military organization is a regiment of the Arizona Cadet Corps, consisting of two battalions of three companies each. Required uniforms consist of khaki-colored cotton pants and shirts and overseas caps and four-in-hand ties. Officers wear regulation felt army hats.—C. A. Carson, Principal.

20. During the session of 1940-41, the high school of Mansfield, Louisiana, in co-operation with the parish, the state, and the U. S. Office of Education organized and put into operation national defense training classes in welding, radio, and auto-mechanics. In this effort the school was responsible for the preparation of buildings, installation of equipment, enrolling classes, helping to secure instructors, and general supervision of the operation of the shops. These classes have continued to the present time and are very popular. More than a hundred men have been graduated from the welding shop and are employed in national defense work, mostly ship yards.

The school co-operated in the civilian defense training of the community in several ways. The most outstanding was making in the industrial arts shop model bombs to be used in the classes, and sniff bottles in the laboratories to be used by the classes to learn to identify the various war gases.

In the session of 1941-42 the Civil Aeronautics Administration offered the school a contract to teach ground courses in Civil Pilot Training. The school accepted the offer and taught several classes. The best of the pupils from these classes were given flight scholarships at government expense. Several young men have completed these courses and are now taking advanced training or are already civil pilot instructors. The school is now qualifying for Pre-aviation Cadet Training as proposed by the United States Office of Education in Leaflet No. 62.—I. C. Strickland, Principal.

21. The curriculum of the high school of Clinton, Iowa during the past four years has been under rigid revision so that it might become more correlated to the pupils' needs and interests as well as those of the community and at the same time increase effective manpower by correcting educational deficiencies. The physical conditioning program designed to include all boys for one hour a day, five days a week, and while not so strenuous for the girls provides numerous courses in home safety, first aid, and home assistance. The school has seen a rapid growth of aeronautical courses as well as Spanish.

It tries to offer a curriculum which will benefit the war effort as well as a long-range educational program for pupils. The school constantly keeps in mind that the war will end some day and pupils will have to work in other industries, therefore, it must not overbalance the curriculum in any one direction. The school principally stresses the necessity of mathematics, sciences, and English as well as physical conditioning, air-raid protection, home care of the sick, and first aid. In addition, the vocational department offers fifteen different courses in various phases of defense work. These courses largely are confined to welding, machine-shop practice, wood shop, electricity, radio, blueprint reading, chemistry, physics, and a number of other related subjects. The school also sponsors an adult evening school during the winter months in which some ten courses are offered which are of direct value in the war effort. This school includes in its curriculum all types of shop work, mathematics, sciences, nursing, languages, English, and homemaking.—F. N. Johnson, Principal.

22. Four types of vocational training are offered in the trade school division of the Stonewall Jackson High School in Charleston, West Virginia. The types are: (a) Day Trade, which gives eighteen months' training in industrial electricity or metal work to regularly enrolled secondary-school boys; (b) Pre-employment Training for men and women between the ages of eighteen and fifty in machine-tool operation, drafting, welding, aircraft sheet metal, and small-tool production; (c) Supplementary Training for employed workers in drafting and industrial electricity; and (d) Trade Extension, also for employed workers, in blueprint reading, metallurgy, commercial photography, pipe fabrication, and sheet-metal layout. A total of 1700 persons were enrolled in these courses, of whom more than 1000 who have completed this training are known to have received employment in numerous war industrial plants. Recently there has been made available to women, training in drafting and small-tool production, for which there is a local demand. Several women have already received jobs after this training.—T. R. Homer, Principal.

23. The Eastside High School of Paterson, New Jersey, located in the city where the Wright Aeronautical Corporation has for years been manufacturing airplane engines, has adjusted its courses to meet the war-time emergency. A mechanical arts course gives training in draftsmanship and experiments, aviation materials have been incorporated into the course rather than rewriting special courses. For example, algebra, geometry, and trigonometry each include problems from the field of aviation and navigation. In the science courses, application of general science principles is made to the aviation field. Thus altitude and its effects, wind and wind resistance, principles of aerodynamics, materials used in plane and engine construction are included. The English department has prepared vocabulary terms current in

aviation. The guidance department attempts to keep the student body informed of opportunities in aviation and other war services.

The most important single project during the present term is the development of a special course in aeronautics, open to all seniors who have had physics and two years of mathematics. It will review and co-ordinate the principles of physics and mathematics with special emphasis upon the following: theory of flight, the control of the plane, general principles of engines, principles of air navigation, principles of meteorology, and map reading. One of the primary objectives of this work is to aid the government in its aviation program and shorten the time of preparation in the air service.

In 1936, five years before the war began, special groups of pupils in the slide rule, transit, and sextant were organized. These groups, working outside school hours, not only study the instruments but receive practical experience in their use. The Mathematics Club is making a study of mathematics needed to be used in wartime. In addition to the work done by the staff in teaching civilian defense, several of the shop and mechanical-drawing instructors are teaching in the adult training program after school hours. The work embraces machine-shop science (the use and operation of all types of machinery used in the construction of engines), the mathematics needed in this work, and the reading of blueprint operation sheets, and other related materials.—J. Tomedy, Principal.

24. The Fort Smith, Arkansas, High School reports defense training classes in which several hundred boys have enrolled. These classes have proved vital to the war effort. The science department is relating its study to national defense. In addition to the regular classwork, outside speakers, for example, on chemical warfare are secured. Pupils likewise prepare assembly programs which treat upon the part science plays in the war. A civilian pilot training course meets three times weekly. At present 120 boys have been graduated. Each boy gets credit for 35 hours in the air and gets a private pilot's license when he is graduated. If he has had both primary and secondary courses he is ready for basic training in the army or navy air corps. In mathematics, special attention is given to its relationship to aeronautical courses. The commercial department is giving special attention to the preparation of stenographers for government work.—Elmer Cook, Principal.

25 The high school in Keene, New Hampshire has introduced a course in aeronautics.—E. Claffin, Principal.

26. The high school in Montclair, New Jersey, has adjusted its program in keeping with war-time needs. Each department and activity within the school has been studied with the view of ascertaining specific contributions that each may make to the war. The art department, for example, designs posters. Assemblies consist of inspiring addresses and pageants built around war episodes. The clothing department has co-operated in the mak-

ing of material for the Red Cross. Thus through such patriotic activities the pupils receive instruction. The commercial department does a number of things within and outside the school, such as helping the local draft boards. The English department has related its material to war-time literature. Some of its activities include literature in the teaching of geography, and in the study of Latin. The mathematics department gives consideration to statistics, graphs, reading charts, standard time, and map reading. A course in aeronautics is now being organized. The shop gives attention to the development of skills helpful in defense industries.—H. A. Ferguson, Principal.

27. The New Mexico Military Institute of Roswell, New Mexico gives attention to military courtesies. Map reading and map making, machine-gun training, rifle practice and equitation, and other standard R.O.T.C. courses are part of their regular routine. In direct response to the war effort, two weeks of spherical trigonometry has been introduced into the regular course of trigonometry. The effort in junior college plain surveying has been more than doubled in order to have more boys with at least the terminology of navigation. All of the graduates who had completed four years of military training were ordered into the service at Fort Riley, Kansas, immediately following graduation.—E. L. Lusk, Principal.

28. Two years ago, the West Senior High School of Pawtucket, Rhode Island began a course in aviation mechanics. A large, well-lighted shop was equipped with lathes, grinders, various types of aeroplane motors, propellers, wings, instruments, and a complete plane in flying condition. The shop now has all the equipment of a government aeronautical school and in addition has available the facilities of a large well-equipped machine shop, in the next room. The course covers the theory and practice given in an army school, uses the same textbooks and supplementary material, and pupils are required to pass similar tests. Instruction is given in radio communication as used in the air and applied to civilian and army flying. The boys have to meet the government requirement of receiving fifteen words a minute and be able to send twice that number. The course was so successful that an advanced second-year course was offered, and a similar course with a like shop was started in the East Senior High School. Nearly 200 boys have taken the courses in the past two years. Of the 32 seniors who took aviation mechanics and were graduated from school a year ago, thirty-one entered the service in ground-crew work and all but one have been promoted. Several are now taking pilot training. So many girls have asked to take the course that a class for girls was started in each school this fall.

The school is offering a course in the science of aeronautics this fall in both senior schools. This is a pre-flight training course, intended to give the background in mathematics and science that a prospective pilot should have.

Textbooks and other available materials will be used and the work supplemented by some of the equipment in aviation mechanics shops. About 100 boys and girls have signed up for this course. The aviation mechanics shops are being used by the State Guard for a 35-week course given evenings. This course covers all subjects which are being given school pupils, including plane construction, engines, communications, flight theory, meteorology, and navigation. Latest textbooks, approved and adopted by army schools are used.

Other courses that have been introduced are also helping in the war effort. A course in radio broadcasting and script writing, with a radio workshop at Station WFCI, and weekly school broadcasts, has been used repeatedly for patriotic programs and war-effort appeals. The visual education department has furnished material and supplied programs for civilian defense and other patriotic efforts. A course in Latin American history stresses the good-neighbor policy and a closer political and economic tie-up with South America. A course in safety driving with a dual-control training car stresses the importance of the conservation of life and health at this time when these matters are so vital.—M. Dascombe, Principal.

29. Many of the regular classes of the high school in Longmont, Colorado are devoting a portion of time to the study of first aid. Home economics classes are gaining experience due to Red Cross work. The art class has made a survey in all classes in which each pupil explained his impression of war and peace through the medium of composition. The school is offering a pre-aviation cadet training course.—K. A. Rason, Principal.

30. The teachers of the Community High School in Pittsfield, Illinois plan their work so that it relates as closely as possible to the war situation. The home-economics class studied consumer buying in wartime and methods of conserving food and clothing. The commercial department made a special effort to train for war industries. The science and physical education classes do much work in training for first aid. The physics and mathematics departments have followed the recommendation of the U. S. Office of Education for the high-school aeronautics course. Physical education classes and sports are expected to intensify and broaden their courses for further physical development.—W. E. Koontz, Principal.

31. During the past year the teachers of mathematics, physics, shop science, and shop mathematics in the senior high school at Dubuque, Iowa, have placed more emphasis on problems which are essential to aviators, navigators, gunners, and the like. A new welding room was finished where these classes of seniors took welding last semester. About twenty of these took a finishing course and became welders in one of the big factories on the west coast. Classes began at 5:45 in the morning and closed at 6:15 in the afternoon for the regular day students. This takes care of four different

sections. With the aid of the government much new and expensive equipment has been added to the machine shop. During the summer, courses in mathematics, physics, typewriting, shorthand, advanced biology, Spanish, and English, were offered. One of these classes offered is for aviation cadets. These young men are taking physics, mathematics, aeronautics, and physical training. At the request of the Veterans of Foreign Wars a "refresher" course is being given to enable aviation cadets to pass the "screening test."—R. W. Johnson, Principal.

32. The Girls High School of Anderson, South Carolina has intensified its commercial program. Classes are five months in length and meet for one hour.—T. L. Hanna, Principal.

33. The high school of Phillip, Texas introduced a unit on the Morse International Code in the general school curriculum. There were fifty-two members enrolled in the course and at the end of the unit they will be able to send and receive twenty letters per minute. The chemistry classes prepared and experimented with poison gases. Sixty-two members of the school classes took a unit in first aid and thirty-six of them received certificates from the Bureau of Mines.—H. K. Kendrick, Principal.

34. In common with a great many other schools, the Central School of Alfred, New York has provided a course in tractor and automobile repair for out-of-school youth. Attention is also given to the repairing of farm machinery in courses in agriculture. This machinery is brought into the school from local farms for repairs.—H. F. McGraw, Principal.

35. An aviation training program has been organized in the high school of Alpena, Michigan.—Clarence E. Hinchey, Principal.

36. The Ingalls Junior-Senior High School at Atchison, Kansas established an aeronautics class with an enrollment of twenty-five boys. This year the enrollment in this class will be doubled. A club has been organized just recently known as the Radio Telegraph Operators Club. This group is meeting one night a week during the summer months and is continuing the program through the present school year.—G. L. Cleland, Principal.

37. An aeronautics course for junior and senior boys and girls has been introduced into the curriculum of the Community High School of Pekin, Illinois.—A. G. Haussler, Principal.

38. Last spring a course was offered to the boys of the high school of New York Mills, Minnesota in the operation of tractors and farm machinery. This was not a classroom course. The instruction was carried on in the field where the boys had the opportunity actually to operate the tractor and other farm machinery in doing farm work.—M. Sonstegard, Principal.

39. The District of Columbia's eight white senior high schools are stepping up their aviation-training program this year. Similar training also will be offered in the colored high-school units. The pre-induction training

will constitute a nine-months course. More than four hundred boys have enrolled in these special courses. A factor contributing to the expansion of this program was the success of the six-weeks pre-flight course given during the summer at the Roosevelt High School. In this course sixty-eight boys were given one and a half hours of mathematics with an equal amount of time devoted to physics and physical condition. The physical fitness program was the Commander Hamilton program established at the Naval Academy at Notre Dame and other pre-flight schools. The materials emphasized in this aviation course are opportunities in aviation, flying and flyers, aero-dynamics, aircraft structure, engines and propellers, meteorology, instruments, and navigation.—C. W. Holmes, Assistant Superintendent of Secondary Education.

40. Voluntary military drill on the part of thirty boys was a feature of the Athol, Massachussetts, High School spring program. These boys were drilled by a retired army captain.—Donald Dike, Principal.

41. Central High School of Aberdeen, South Dakota has instituted a course in radio science. This course has as its ultimate objective, through practical work experience, the giving of fundamental training to pupils interested in the field of pre-aviation training requisite for the army and navy, as well as for individuals interested in radio as a vocation. Included in the course are elementary electricity, sound, construction of receivers and transmitters, testing, and transmission and reception of Continental code. Prerequisites are a genuine interest in radio, and facility in elementary algebra. The course may be elected for one or both semesters, and carries credit as a science. Successful completion will give the pupil a good start toward a commercial or amateur radio license, or a preparation in the radio knowledge required today in civil or military aviation. Courses in the general metals department of the high school have taken on new significance since the work experience is tied up more directly with the prevalent need in the essential defense industries for such trained workers as welders, riveters, tinsmiths, and lathe operators. Courses in woodworking, by stressing new approaches in line with present-day commercial and defense needs, are attracting boys who are interested in pattern making and airplane construction as a vocational pursuit.—R. R. Deimer, Principal.

II. PRODUCING GOODS AND SERVICES NEEDED FOR THE WAR

ROBERT W. FREDERICK, PRINCIPAL

Junior-Senior High School, Albany, New York

The modern secondary school, although it is traditionally very slow to react to changing social and economic activities, can upon occasion adapt very rapidly to non-controversial public affairs. This capacity for adaptation is, in no way, better illustrated than by the rapidity of the school's acceptance of the many challenges thrust upon it by our nation's involvement in a world-wide war. The Milne School has not been unmindful of the fact that one supreme task confronts the people of America. No department of the school has been untouched by the demands of the war effort and no department has failed to make its particular contribution to the totality of effort which is so necessary when war is waged as it is today on a planetary scale by every citizen old or young.

The school as a body entered into the Treasury Department's war bonds and stamps sale. Every pupil and every member of the faculty made purchases. The school as a whole bought some \$7,211.60 worth of Treasury issues last year. Under the chairmanship of a junior pupil the sales were handled with efficiency and dispatch. Members of the student body and faculty also contributed without exception to the special Red Cross drive for needed funds. A special entertainment was given to raise additional funds.

CONTRIBUTIONS BY DEPARTMENTS

The home economics department undertook to instruct the girls in the basic art of sewing by making children's garments for the Red Cross and Bundles for Britain organizations. The girls in this department came to a full realization of the impact of the war on the citizen by the making of clothing for the bombed-out children of the British Isles. The sewing department also made a very beautiful service flag to honor the many Milne boys who have entered the armed forces. This flag has served as an inspiration and reminder that war in this twentieth century reaches into the lives of all of us. The cooking division began a program of instruction in the conservation of food and the maintenance of adequate diet in a period of rising prices and restricted food supplies inevitably attending war effort.

The boys physical education department made use of some of the physical education activities set up by the military authorities as valuable conditioning exercises. This department also along with the girls intensified its effort to safeguard the health and well-being of all our pupils in the realization that the extra demands of war make the preservation of physical vigor of transcendent importance.

The Milne Library utilized the recommendations of the Civil Aeronautics Authority and purchased a selected list of book titles to bring the library re-

sources up to date in the important field of aviation. These books will accomplish two major purposes. They will, first of all, contribute to our effort to make every American youth an aviator at heart and also they will be utilized in the teaching of the courses in radio-communication and aeronautics.

The guidance department was of incalculable value to the boys in advisement regarding enlistment in the armed services and regarding the status of college students in the several branches of the army and navy. The possibilities of Naval V-1 enlistment was made clear to the more than a score of young men going on to college interested in mathematics and science.

The art department made a great many posters, some for school use and others for use in the community at large. The art department also rendered a marked service to the young ladies in selection and designing of clothing under conditions of shortage inevitably accompanying the diversion of wool, cotton, and silk to the war effort.

The social studies department early in the year, before December 7, undertook to aid the pupils in an understanding of the tremendous significance of geography and the distribution of raw materials in a war involving every region of the earth. The daily shifts on the political and military fronts were made the matter of daily consideration to the end that our future soldiers, our older and younger pupils, might have a comprehensive understanding of the issues at stake. Special attention was given to the history and significance of the Bill of Rights in every class.

The music department had its share. Our director of music brought to the student body and our guests at athletic contests the stirring music of the *Star Spangled Banner*. To the extent that music helps in the building of morale, our music department made an outstanding contribution.

The industrial arts and crafts departments were asked to participate in the production of scale model airplanes to be used in the training of naval aviation personnel. The making of these planes was not only a direct service to the naval aviator but also served to help make pupils conscious of the fact that aviation during the war and thereafter will be a dominant factor.

Early in the year a committee was appointed on aviation consisting of members of the science, mathematics, and industrial arts departments. This committee had as its purpose, the selection of library books on aviation, the modification of the work of several departments to include some spherical trigonometry, meteorology, special matters of physiology. The committee was charged with development of a course in radio-communication and another in aeronautics. These courses are offered as electives this school year.

THE SCHOOL SERVES THE COMMUNITY

The department of audio-visual aids secured and showed a wide variety of films in many departments to enlarge the student understanding of every

phase of war. Some of the titles of the films shown are as follows: *The People of Western China*, *The Bill of Rights*, *Wells Across India*, *Man Behind the Guns*, *Diesel—The Modern Power*, *Building of a Bomber*, *National Defense (Film Number 1 and Number 2)*, *Power for Defense*, *Homes for Defense*, *America's Heritage*, and *Army on Wheels*.

Through the director of physical education for girls, two classes were conducted for the mothers of our pupils. One class was in first aid following the Red Cross course of study. The other class was in physical education. Both these classes were well attended and had in addition to their identification with the war effort the further benefit of acquainting the mothers with these phases of the school's work. A class in first aid was also conducted.

A boy's model airplane club was conducted as part of the school's extra-curriculum program throughout the year. This club was for beginners in model plane building and gave the boys an instructive recreational pursuit.

Finally, it ought to be said that the student body and faculty, especially after December 7, approached their work with a renewed seriousness. Especially was this more intensified application brought into the fields of mathematics and science. The stream of affairs, military and civil, has brought home to the faculty and through the faculty to the student body the fact that there is no substitute for a thorough grounding in mathematical and scientific branches. Without in any way neglecting the less competent pupils, special work was made available both before and after the regular school day to the top ten per cent in scholastic ability for it is from this group that the designers, the engineers, and the strategists of the future must be drawn.

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The nation is confronted with the necessity of producing the maximum amount of goods and services, not only for ourselves but for our Allies as well. The secondary schools are making every effort to make the greatest contribution possible to the nation. In the numerous reports that have been submitted, quite a variety of goods and services are being produced by the different schools. Certain common activities were found to be engaged in by practically all schools. For example, practically every school has given attention during the summer, not only in encouraging pupils to plant victory gardens but many of them have also given attention to the supervision of the preparation, planting, cultivating, and harvesting of the products raised in these gardens.

Every school has co-operated in the sale of defense stamps and bonds. Not only have pupils and teachers purchased stamps and bonds even to the extent of sacrificing but they have also given their services to the promotion of sales to their parents as well as their next-door neighbors. These sales have amounted to huge sums within the schools. For example, the Stonewall

Jackson High School of Charleston, West Virginia had purchased over \$25,000 worth of stamps and bonds by the end of the school year. In many instances the sales of these stamps and bonds were conducted by the Student Council or a special committee quite commonly termed the Student Defense Council or Committee.

The Student Council and the mathematics department of the Keith Junior High School of Altoona, Pennsylvania sold to the student body more than \$3,500 worth of stamps alone. Practically every school reported intensive drives for the collection of books during the national Book-Collection Week to be given for the use of the armed forces. Many schools have organized messenger detachments to assist in the local defense program. These pupils, most commonly composed of boys, are specially trained to do messenger service both within the school and within the community during air raid and other emergency possibilities.

Practically every school has contributed in making model airplanes and in assisting in the sugar and gasoline rationing. The Eastside High School of Patterson, New Jersey in response to the request for airplane models completed three hundred twenty-five planes that were entirely acceptable as models. These included all types of British, German, Japanese, American, and Dutch planes, from patrol boats to the smallest fighter. Many schools in the cities as well as in the country have given assistance in encouraging school pupils to assist the farmers during their rush periods. The following accounts are examples of a variety of activities engaged in by the schools in producing goods and services needed for the war. At the same time, a few schools are cited as examples of the more common activities mentioned above.

EXAMPLES OF ACTIVITIES

1. The Township High School of Palestine, Illinois has established an employment bureau. Not only were boys placed on farms through this agency during the summer but in the early spring and fall as well.—A. C. Daugherty, Principal.

2. The John Deere Junior High School of Moline, Illinois has introduced a broad program of services needed for the war. Not only have the girls contributed much in the way of making garments, knitting sweaters and afghans for the Red Cross but the entire school has placed special emphasis upon safety in the war and upon the service to the nation as provided through Home Guard duties. The school has made more than 40 acceptable airplane models for the navy. These models were all made on an exact scale of 1 to 72. This scale means that a model airplane seen at a distance of 35 feet is identical with a real plane seen a mile away.—A. W. Wood, Principal.

3. The Stonewall Jackson Senior High School of Charleston, West Virginia has had a school-wide magazine subscription campaign for the war

emergency. The pupils within the school also prepared the school building and organized the school forces as a disaster shelter.—T. R. Horner, Prin.

4. The pupils of the Keith Junior High School of Altoona, Pennsylvania entered enthusiastically in the victory garden project. So enthusiastic were the pupils about the project that the local PTA held a garden show in the fall and gave prizes for the vegetables grown by the pupils in their war gardens. Pupils kept complete records of all their activities concerning their gardens during the summer and submitted these records together with their produce in competition for prizes.—C. E. Whipple, Principal.

5. The Senior High School in Tucson, Arizona had a class in child care which made two complete layettes for refugees. The class likewise completed 150 baby garments and knitted many scarfs and sweaters for the Red Cross. The school co-operated in the Victory Book Drive and collected 5,772 books and 10,467 selected magazines. In addition they, together with the Dunbar School, collected 2,000 coat hangers for an Arizona army-post hospital in response to their SOS call. Likewise in response to request from the post the school sent them 1,500 magazines and a large assortment of books. They also supplied a neighboring military hospital with games, card tables, books, and magazines. Entertainment features were provided the men in the service by pupils in dramatic art, public speaking, instrumental and vocal music, and physical education. Soldiers were admitted to school games at special prices and baseball games were arranged between the soldiers and the high-school team.—C. A. Carson, Principal.

6. The pupils of the high school in Albuquerque, New Mexico give considerable time to the making of posters as promotional material for the selling of stamps and bonds as well as letting people know what is being done and what they can do in the war effort.—Glen O. Ream, Principal.

7. The home-economics clothing class of the West High School, Green Bay, Wisconsin completed 70 garments and 30 sleeping bags for the Red Cross. In addition they made 50 layettes and over 500 garments including 50 baby quilt tops made from waste materials.—W. J. Harper, Principal.

8. A volunteer Pupil Service Club of the Union High School of Downey, California does clerical and stenographic work for the Chamber of Commerce and the Selective Service Board.—C. C. Carpenter, Superintendent.

9. Many of the pupils of the College High School of Greeley, Colorado work in the Greeley Hospital assisting nurses as preparation for qualifying as nurses' assistants. More than 20 pupils have already enrolled in a Red Cross first-aid unit.—Wm. L. Wrinkle, Principal.

10. The pupils of the science classes in the high school of Hobbs, New Mexico have been giving demonstrations in the city on the extinguishing of incendiary bombs. These demonstrations are given in co-operation with the

local fire department as a means of educating the people in the community concerning this phase of protection.—T. C. Bird, Principal.

11. The Lincoln High School of Des Moines, Iowa has been prepared as one of the four schools to serve as an auxiliary hospital in the case of an emergency. In order to test the efficiency of its organization a special try-out was instigated. At a specified hour known only to those in charge, Lincoln's three unit-executives telephoned their key men who in turn called other key men, thus making it possible to contact first aiders, messengers, teachers, nurses and their aids, guards, and staff members, in a minimum period of time. Ninety people reported for duty at the school in less than forty-five minutes.—Margery Macfarland, Principal.

12. The high school of Charleston, Illinois is offering a special guidance service designed to familiarize its pupils with the opportunities presented by the various branches of the armed service. This has been established on the basis that 18-year-old pupils will very shortly be called into the service of their country. The two phases of the counseling program which are given special emphasis are the guidance given to the pupil who has the ability to do college work and that given to the pupil whose records show that he does not have that ability and as a result will go directly into the service of his country without going to college. The counselors makes every effort to point out to the pupil the type of training for which it appears he is best fitted, giving him all the information about the various activities and possibilities in the army, thus making it possible for the pupil to make a wise choice. The plan includes a continuous program of civic services in order that out-of-school as well as in-school pupils are aided. This has been found rather helpful in getting parents to understand the many possibilities of total war effort as well as giving these pupils helpful information.—E. L. Hardin, Principal.

13. The high school in Fort Smith, Arkansas had more than 40 boys engaged in producing the school's quota of 250 model airplanes. These boys also constructed models for the local CPT unit at Camp Chaffe and the local Civilian Defense office.—Elmer Cook, Principal and State Co-ordinator.

14. The West Senior High School of Columbus, Ohio studied aviation and made 70 acceptable model airplanes for the Federal government. The botany pupils started, nurtured, and distributed 15,000 tomato plants for the victory gardens last spring.—H. H. Rieghley, Principal.

15. The Students Association of the Simon Gratz High School, Philadelphia, Pennsylvania following the outbreak of the war organized a program to meet the war emergency. Committees were formed with faculty sponsorship for the following activities: knitting groups, first aid group, the morale committee, stretcher-bearer committee, auxiliary police, poster groups, messenger service, and army and navy welfare committee. The purpose of

the welfare committee was to maintain correspondence with Gratz boys in the military service and to send them copies of the school publications.

The Students Association collected materials and packed two hundred soldier kits which were then sent to the camps in time for Christmas. There were also campaigns for raising funds and making donations to the Red Cross, United Charities, and the Salvation Army. The columns of their bi-weekly newspaper *The Spotlight* have featured stories of the defense program, stories on the scene and location of the war, morale articles for parents and pupils, and quotations of importance bearing on the war. In like manner the assembly committee of teachers and pupils has prepared interesting and inspiring programs having relation to the war effort. Speakers representing important activities have accepted invitations to address assemblies on various occasions. The school assembly plays an integral part in the morale program. Another important activity is conducted by the distributive education class. This group of pupils attends school in the morning and reports for employment to local merchants in the afternoon as sales personnel.—E. C. Werner, Principal.

16. The student body of the academy at Fryeburg, Maine under the direction of the faculty is carrying on many forms of support to civilian defense. The home-economics department is working continuously in making clothing for the Red Cross. Layettes, stockings, helmets, and sweaters have flowed from the work rooms.—A. M. Perry, Principal.

17. The pupils of the Stoddard Junior High School in Philadelphia, Pennsylvania are contributing many services and goods needed for the war. Many groups of girls are knitting squares for blankets to be used in the army and navy hospitals. Many boys in the shop are using scrap materials in making ash trays, first-aid containers, and similar articles for use in the hospitals. Shops are open after school hours for try-out courses for persons recommended by NYA and the United States Employment Service. Teachers took courses training themselves for air-raid wardens and Red Cross first-aid instructors and are now acting as instructors for civilian groups. The home-economics department is operating a "toddlers" nursery each afternoon through which girls are instructed in taking care of groups of children three and four years old in such activities as play, naps, cleaning up, eating, and taking care of their belongings. This is undertaken partly as a service to mothers who need to place their children under adequate care while they are working, but most particularly to recruit girls who have a talent for this field of service which looms large for the future.—I. E. Branhut and H. W. Estlack, Teachers.

18. The pupils of the East Senior High School of Rockford, Illinois have been active through their school programs in providing goods and services needed for the war. All clubs and organizations within the school

clear their war-effort activities through the Junior Red Cross in order to avoid duplication. Some of the projects completed during the past year were: 36 place cards made for the Red Cross dinner, 125 cross word puzzle books, 50 hot water bag covers, 15 doz. cookies, 125 ash trays (USO), 350 coat hangers for Camp Grant, 35 puzzles for USO, and 130 splints.—H. C. Muth, Principal.

19. The industrial art classes of the Central High School of Bartlesville, Oklahoma, co-operated in the government project of building model airplanes. One hundred seven planes were approved out of 136 planes built and seventy-one pupils received certificates.—M. W. Taylor, Principal.

20. The University High School at Madison, Wisconsin has given particular emphasis to assisting boys and girls to find jobs during the summer. A placement bureau was set up during the spring. A survey of the student body was made both as to those willing to work during the summer and as to the types of work each could do. Pupils were urged to volunteer for service during the summer, especially to help the farmers. Information was secured concerning each pupil as to his previous employment status, his plans for the summer, his special abilities, and his previous work experience. This information was then verified and supplemented by the school itself. In co-operation with the local Federal employment agency, boys and girls were placed in jobs, thus helping out in places where there was a definite shortage of manpower. A two-page questionnaire was likewise drawn up by the committee which was given to the pupils to fill out and return to the school office. Some of the jobs at which pupils worked were washing clothes, washing windows, delivering papers, messages, and packages, taking care of small children, mowing lawns, clerking in stores, and working in factories and on the farms.—John Goldgruber, Chairman.

21. Over 1000 books were contributed by Maine Township High School pupils in Des Plaines, Illinois to the victory book campaign. Over 300 model airplanes were accepted by the Federal government as the school's contribution in this program. In order to pay for the wood used in the construction of the planes, a tag day was held by the pupils. Over one hundred dollars were raised by this method. An aeroplane detection unit was constructed in the Maine Tower. By this unit it will be able to detect planes coming within a 75-mile radius of the school. Pupils from the machine shop, the electricity classes, and the mechanical drawing classes made, assembled, and arranged the rather intricate equipment. Three Sunday Chicago newspapers (the Sun, The Tribune, and The Evening American) printed photographs of the post being manned by pupils.—H. P. Harshbarger, Co-ordinator.

22. The high school of Gladewater, Texas was dismissed for both sugar rationing and selective-service registration in which the school building

was used for these purposes. Two Red Cross drives, a Junior Red Cross drive, and a USO drive have been put on in the school. The counselors, supervisors, and teachers have given much guidance to pupils concerning the war-time program and panel discussions have been held by the faculty and student body, giving general and specific plans for the best program possible during this trying time.—J. J. Traugher, Principal.

23. The pupils of the high school of Chenango Forks, New York became keenly interested in the victory-garden program. The services of the local Parent-Teacher Association were solicited, money for seeds was donated by the organization, a snow plow owned by the school was converted into a plow, land was secured from willing donors, and the land was worked and put into fit shape by the boys from the agricultural classes. Work during the summer was carried on by the Parent-Teacher members and members from other groups living near as well as by pupils. Products will be canned by members of the Parent-Teacher organization under supervision of the school's home-economics teacher and the finished products used in the school cafeteria this winter.—M. G. Pattington, Supervising-Principal.

24. Sewanhaka High School of Floral Park, New York has set up the Air Training Corps of America program for juniors and seniors. This activity has been conducted on a club basis and has now become part of the regular school program. Subjects will include aerodynamics, meteorology, engines, navigation, and airmen's physical fitness. The purpose of this program is to give pre-flight training to the potential fighters in our air forces. The school offered a six-weeks course during the summer for which science and mathematics teachers volunteered.—H. A. Schroeder, Principal.

25. The Washington, D. C., Senior High Schools have for some years had military training as a part of the secondary-school program. Following the outbreak of the war the regular Springfield rifles used by the cadets were returned to the army. In order to provide rifles for the training of these pupils, the District decided to make wooden rifles. Three industrial-arts teachers and several pupils spent the entire summer in the woodwork shops of three of the high schools making a total of 2,700 wooden rifles. The gun, made of western fir wood, is cut to exact size and model. The main body of the gun was stained dark brown and the gun sight, muzzle, and shoulder-strap holder were emphasized by black paint and lacquer. The wooden rifles will replace about three thousand .30-caliber Springfield, 1903 model rifles. These wooden guns weigh slightly less than three pounds in contrast to the Springfield's eight pounds. Costing \$1.00 each, they will be paid for by each high school according to the number ordered.—Paul G. Lackey, Industrial-Art Instructor.

26. In New Jersey, legislation has been passed permitting boys to work on farms for fifteen days in one year. While the Jonathan Dayton Regional

High School of Springfield, New Jersey is in an industrial area, it does have an agricultural course in which the boys are trained for a variety of agricultural enterprises. The instructor in agriculture has placed many of the boys for fifteen-day periods on farms, many of which are outside of the county. This placement of boys on farms was not confined to those in the agricultural course, but was open to any boys who wished to secure farm employment.

Because industry needs workers, examinations for seniors were completed at the end of May and any seniors with full-time jobs were excused on June 1st, despite the fact that school did not close until June 23rd. In a few instances seniors were excused in May to accept full-time jobs without in any way affecting their diploma status.—W. W. Halsey, Supervising Principal.

27. The high school of Wetumpka, Alabama held school on Saturday last spring in order that the school might be closed earlier in the season, thereby releasing pupils for urgent farm work.—C. R. Weldon, Principal.

28. Industrial art classes of Central High School, Bartlesville, Oklahoma have co-operated in the government project of building model planes. One hundred and seven planes were approved out of one hundred and thirty-six built, and seventy-one pupils received certificates.—M. W. Taylor, Prin.

29. The agriculture class of the Community High School in Pittsfield, Illinois has canvassed the community for scrap metal. They canvassed the school for farm help and gathered a list of the boys who would be available. Farming in wartime is discussed in the classes.—W. E. Koontz, Principal.

30. The high school in Marion, Virginia has given real support to the planning and growing of victory gardens. To improve the quality of the products, forty-five girls and fifty boys took agriculture last year. During the summer, pupils operated 346 gardens.—W. W. Wilkerson, Principal.

31. Through both individual and group projects the boys studying agriculture at Central High School, Chattanooga, Tennessee are learning to do all types of farm work after school, on Saturdays, and during the summer vacation. These boys kept abreast of the times by planting and caring for victory gardens. On a farm, which the instructor has adequately equipped, they gain experience in pruning and spraying fruit trees and in spreading lime and phosphate on the land. They also learn to plough and to sow. One boy who has made a study of the AAA and who expects to major in agriculture in college, is measuring land for farmers who are complying with this program. Another pupil who wishes to become a veterinarian makes field trips to the stock yards with his instructor in order that he may study defects in horses and mules. He is also studying live-stock physiology and nutrition. The recent rationing of sugar provided such motivation for a group of boys studying bee-keeping that their erstwhile hobby bids fair to become a profitable industry.—S. E. Nelson, Principal.

III. CONSERVING MATERIALS BY PRUDENT CONSUMPTION
AND SALVAGECLIFFORD T. RIDDEL, Jr., PRINCIPAL
High School, Weyers Cave, Virginia

As the international situation became tenser and tenser in November and December last, I found a small group of pupils in front of my office one morning. One of them addressed me, "What are we going to do now?" Uncertainty seemed to prevail in the minds of everyone. Then, when the United States really found herself involved in the war after the Pearl Harbor Incident, both the faculty and the pupils set themselves doggedly to the task of re-adaptation to war conditions. Here was a job to be done; the entire school set itself to it. In the home economics classes the girls knitted wool squares for the Red Cross and busied themselves with studies on nutrition, home nursing, and rudimentary first aid. The chemistry class made special investigations on incendiary bombs, explosive bombs, gases and gas masks, synthetic rubber, consumer chemistry, and foods. The machine shop was enlarged, and the farmers sent mowers and other farm machinery from home to be repaired by the agriculture boys. Social studies classes took up first aid and made community surveys with regard to health and care of property. Some of the boys volunteered to help at the local airplane reporting station, while other pupils aided with the community canvass for the war stamp and war bond pledge. Democracy began to take on new meaning throughout the entire school system at Weyers Cave.

Increased attention was given to fire drills, and air-raid drills were organized and practiced. Committees of pupils accepted the responsibility to see that all rooms were properly cleared, with windows and doors closed. In this manner we were able to evacuate the building or go to our shelter in less than a minute and a half.

The teachers at faculty meetings were asked to adapt their materials to conservation and patriotism. Outstanding speakers from the community addressed the assembly where they discussed democracy and the problems involving the present crisis. Committees from each home room helped gather scrap paper, collapsible metal tubes, and scrap metals. In less than two weeks over a ton and a quarter of waste paper had been salvaged, sold, and the proceeds turned into United States Defense stamps. This work is still continuing. During a three month's period the faculty and student body have invested \$775. in stamps and bonds. This figure pertains only to the stamps and bonds owned by the pupil, not those belonging to his parents. Many pupils are voluntarily giving up candy and other luxuries to purchase Defense stamps from the school office. Carefully placed posters on the bulletin boards help augment these sales. "Do your part" is no longer a radio request, but it has been translated into the many deeds of the personnel of the institution.

Along with other community organizations we are sponsoring a two-acre Victory garden, the chief purpose being to provide for the school-lunch program during the coming session. The garden was planted and is being cultivated by the pupils and interested patrons under the supervision of the agriculture instructor. The vegetables raised will be canned or processed on the premises by the ladies of the community under the direction of the home-economics teacher. The school-lunch room, which serves from eighty to one hundred pupils each day, provides a balanced meal to each child for ten cents daily, or forty-five cents provided he buys a weekly ticket. Chocolate milk and ice cream are available at a nickel each—extra. Twenty children are fed free of charge daily, a part of their food being provided through Surplus Commodities. Kitchen help and service are provided through WPA and "out of school" NYA youths, along with student voluntary help. Any pupil who does not have the money to purchase a ticket may bring produce from home to be exchanged for lunch tickets. Indigents are not separated from the remainder of those dining in order to keep down the feeling of superiority among the more fortunate and to give the other group the feeling that they are really a part of society.

During the summer months we assisted families to grow additional food and helped them can or otherwise preserve it. Each family was surveyed and asked to plant a garden of some kind. The school made available garden seeds to the community at cost—practically wholesale—prices to assist these projects. Mimeographed price sheets were sent to the homes, and those desiring seeds marked the quantity and sent the order back. The seeds were purchased in bulk and each person's order individually weighed by the boys. This was a delicate task, since such seeds as celery were sold by the tenth of an ounce. About \$150. worth of seeds were sold in this manner. To keep down the cost and to conserve paper each buyer furnished his own containers for the seeds. All those individuals who could were asked to plant extra rows in their garden to help provide for those who could not possibly maintain one. Members of the 4-H club took over a project of growing vegetables.

Several families of the community who are unaccustomed to preserving their foodstuffs have been selected, and the home economics teacher has concentrated her work with these families by summer visitation, rendering whatever service she could. A committee composed of interested citizens also helped here. In this way we feel we could be assured of a great deal more produce than it would be possible to obtain otherwise. Special emphasis is being placed upon drying of fruits and vegetables due to the shortage of can rubbers and sugar.

The school serves as a community center and practically all meetings are held here. At the present time special space has been provided for courses in first aid and home nursing. As in the case of the high-school courses the county doctor and nurse have presented a part of this work to the adults. For

farmers who are interested, the vocational agriculture department has been holding adult classes. The Parent Teacher Association has had two meetings which dealt primarily with the problems arising from the country's war conditions. These meetings were held in the form of study groups, where the parents divided into various groups of special interest under the leadership of one trained in that particular discussion field. After an open forum discussion in these small groups, the entire assembly re-gathered and the various secretaries made reports to the body concerning their group's activities. The Home Demonstration Club has carried on additional work in nutrition, and in conjunction with the local Ruritan Club is assisting the school in every way possible to provide glasses, tonsilectomies, and clinical facilities for the indigent.

Many of the children who had formerly ridden in automobiles to school now ride the buses or walk. The student body in their regular meeting voluntarily decided to curtail some of the activities which required considerable travel. Basketball, for instance, became practically intramural; the number of baseball games was decreased. Instead of having three nights for commencement, as had long been the custom, two were voted, with the further possibility of making it one if necessary. Club programs, formerly held at night separately, are combined to present a joint public program.

Judging from the way the boys and girls in school are taking the loss of many things to which they had been accustomed, and judging from the manner in which teachers assisted in the rationing program—beginning their work at 8:30 in the morning, teaching a full day, then rationing until 8:30 at night for at least a week—we can be sure that in this community, and in many others, democracy will flourish. Just so long as the school accepts these challenges with its chin up, the school will be the first bulwark in the democracy we are to have after this great struggle has been concluded. *Democracy* cannot be crushed so long as we are able to keep democratic ideals in our public schools.



In view of the shortage of much material needed for military purposes, renewed attention is being given to the matter of conserving materials by prudent consumption and salvage. Many high schools have introduced consumer education courses in which they attempt to have the pupils appreciate the values and proper use of materials. In the foods classes the pupils are attempting to find recipes that will require little or no sugar. Likewise the clothing classes are giving attention to the conservation of materials as well as the possible use of substitute material. At the same time they are "re-processing" much old and oftentimes discarded clothing materials. Many schools, through their Student Councils or Student Associations, have developed programs to urge pupils to use school property carefully and sparingly.

There is probably no school that has not participated in the collection of newspapers, books, magazines, and scrap metal as well as the conservation of such critical materials as rubber. The examples which follow are indicative of the variety of activities in which schools are engaged.

EXAMPLES OF ACTIVITIES

1. The Student Council of the Jackson High School at Charleston, West Virginia has developed a plan to collect scrap material. Cartons are placed in each classroom for the disposal of this material. During the first part of the paper-salvage drive a baling machine was purchased. By the end of the year the sale of the paper collected by the Student Council paid for the machine. The members of the school's Hi-Y sponsored a school-wide collection of coat hangers.—T. R. Horner, Principal.

2. The local Boy Scout troop co-operated with the Keith Junior High School of Altoona, Pennsylvania in collecting paper and other salvage material. Over twenty-two hundred books were collected.—C. E. Whipple, Principal.

3. The West High School of Green Bay, Wisconsin has organized a club known as the Youth's War Service Club. The purpose of this club is "to help our country in whatever way possible to win this war." The Club not only has charge of the salvage program but also takes as its responsibility the writing of letters to men in the service. They have planned lessons on air raid, on first aid, and on handling incendiary bombs. The art department has co-operated with them in preparing posters. Two of the posters used during the conservation program of last year emphasizing the need for the saving of electric current were entitled "Tanks for Putting Me Out" and "Turn Me Out When Not in Use So That We Can Save the Juice." Another poster was entitled "Save Scraps to Beat the Japs." The members of this service club or committee are faculty advisor, chairman, secretary, treasurer, and the chairmen of the following committees: publicity, demonstration, victory gardens, conservation, salvage, and first aid.—W. J. Harker, Principal.

4. The East Senior High School of Rockford, Illinois of 1600 pupils is making every effort to conserve light, power, heat and essential materials. No war effort, great or small, fails to capture the patriotic enthusiasm of this student body. The school has adopted "four fronts," through which all their work is related to the war effort. These fronts have been named by the student body: the school as a whole, student organizations, home rooms, and department of instruction.—H. C. Muth, Principal.

5. The entire high-school student body of Keene, New Hampshire has been co-operating in the collection of paper and magazines. Last year more than fifty tons were collected by these pupils. The money derived from the sale of this material was turned over to the Junior Red Cross chapter. Some of this money was used to keep in touch with the former pupils of this

school who are now in the armed service. The responses from these men are most enthusiastic.—R. E. Claflin, Principal.

6. The high school in Clinton, Iowa has found that worth-while projects can be more easily accomplished in co-operation with the student government than is the case if the faculty itself attempts them. School administrators today must realize that the average pupil is in school to get as much as he can out of it in education and social developments, and at the same time enjoy everything in which he participates. Pupils must be taken more and more into confidence by the administration and the faculty in order that their viewpoints might be fully realized. The modern school has no place for an administrator or a teacher who does not try to view the pupils and their problems in the light of a long-range, lifetime prospective. This school feels that it can only educate for democracy by practicing it and bringing all pupils and faculty members under its supervision into a closer realization of its meaning and methods of functioning.—F. N. Johnson, Principal.

7. At Grant Junior High School in Denver, Colorado, a program of conservation was initiated during the weeks of May 11 and 18, 1942. Those responsible for the project realized that time was limited, but felt that the problem was an immediate one which could not be postponed until the fall semester. A committee made up of faculty members appointed by the principal prepared a suggested unit which was placed in the hands of each teacher of general education. The teachers and pupils planning together worked out their own units in the classroom. One of the most interesting activities carried on by one class was the collection of food wasted in one day in the school lunchroom. This was displayed at a PTA meeting, and enlightened parents as to the part the home could play in helping to eliminate this needless waste. Pupils saw the wasted food on tables in the main hall. A noticeable improvement was shown in the conservation of food in the lunchroom, thereafter.

Another class decided to be responsible for the insertion of slogans in the school's daily bulletin. These were later incorporated into a playlet given in the conversation assembly program. Most of the general education groups made collections of essential war materials. Collecting tin foil and razor blades was a common activity. One teacher graded notebooks about three weeks earlier than she would have in order that the papers pupils did not wish to keep might be a part of the conservation activity of the group. A number of classes worked out check lists on which items that could be conserved at home and school were checked. One division of pupils wrote a pledge which the members of the group signed. The pledges were printed in the print shop by boys in the group who took printing. As a culminating activity, a general assembly was held in which each group presented its

project by means of a playlet, song, poem, or other activity planned by the group. This program revealed the many practical ways in which citizens of Junior high age may contribute their bit to the defense of our country. The entire student body at Grant has become conscious of the value of individual as well as group action in aiding victory by conservation.—C. H. Stone, Principal.

8. The Lewis Consolidated School, Monument, Colorado has entered actively in the collection of scrap metal, tin foil, paper, and other needed materials. As a means of conserving, the school athletic program with other outside schools has been curtailed. Likewise, activities, trips, and the like which required transportation have been displaced by more social and club activities within the school.—Gentry Stewart, Principal.

9. For all bulletins and other mimeographed material at the Lincoln High School in Cleveland, Ohio, both sides of the paper are now being used. Paper that has been used on only one side is saved, cut up and used on the blank side for notes and notices. The Junior Red Cross has large cartons placed in four different spots in the building for the collection of papers which they store in a near-by garage, owned by a member, until they have enough to sell. Lists and notices which are typed in large numbers are arranged to conserve paper, rather than to make the best appearance, and in some cases only a fraction of the paper formerly used is needed. Envelopes from the volume of advertising material sent through the mail can be used instead of new ones for many purposes. Some of the routined mimeographed material has been eliminated. Pupils are taught the proper care of garments when not in use, such as placing them on a hanger and keeping them covered. Mending receives its share of demonstration and practice. Darning, patching, alteration, and remodeling are encouraged at all times. Cuttings from woolen skirts and dresses have been sewed into an afghan which was donated to the Red Cross. A discarded woolen bath robe was used for the lining, and now an afghan of corduroy has been started for the Red Cross.—C. H. Lake, Superintendent.

10. The high school of Marion, Virginia has adopted the motto "Save Something, Produce Something." A canvass was made of the entire student body to find out just what each person was doing to help the victory effort. The list of activities included saving paper, cardboard, bottles, scrap iron, razor blades, tin foil, copper utensils, aluminum, metal tubes, rags, and rubber. Other items listed were: keeping informed, keeping physically fit, better school attendance, learning to use less of everything, and sacrificing when necessary. The negative side included avoidance of hoarding, and of the spreading of rumors. The canvass showed 100 per cent participation. Each room was given a Victory sticker for the door.—W. W. Wilkerson, Principal.

11. At the senior high school of Tucson, Arizona, not only victory book drives but also waste paper campaigns are handled by the Junior Red Cross emergency chairman. Volunteers were called for to carry on the work of sorting and bundling. In this way the pupils not only helped in the salvaging of materials but also earned money sufficient to buy four bonds. When these bonds mature they will be given to the Student Service Fund of the Junior Red Cross.—C. A. Carson, Principal.

12. The pupils of the Lincoln High School of Des Moines, Iowa have entered into the collection of scrap iron and other defense materials.—Marjorie Macfarland, Principal.

13. The Roosevelt Junior High School of Erie, Pennsylvania has participated exceedingly actively in the collection of waste paper and rags. This material is sold and the money devoted to the work of the Red Cross. Likewise assembly plays are built around topics that have to do with prudent consumption and salvage. Whenever the opportunity presents every teacher relates this important phase of the work program to the subject being taught.—H. C. Gillespie, Principal.

14. In co-operation with all the rural schools in the county, the Jackson County High School of Colorado, conducted drives for paper, rubber, and scrap metal.—Grace W. Mathews, County Superintendent.

15. The high school in Marshall, Missouri continuously presents to its pupils the idea of conserving various essential materials. In addition, and of equal importance, is the idea of conserving energy and dedicating it to the promotion of democracy. The school feels that it must somehow get across the idea that conservation is popular and smart—in other words, that it is the thing to do. This idea will touch such goods as foods, clothing, money, utilities, tires, paper, scrap metals, and any other materials that require conservation and salvaging to win the war.—A. H. Bueker, Principal.

16. The pupils of the senior high school in Farrell, Pennsylvania collected waste paper as a patriotic measure. The pupils visited every business house in the city to ask the individual merchants to co-operate. Collection of waste paper was made every Monday and Thursday and the paper was brought to the school where it was baled by the pupils. The paper was sold at the best available price and the money was used to aid the science department.—W. R. Anderson, Principal.

17. The social science classes together with members of the Conservation Club of the high school of New York Mills, Minnesota prepared a survey of the school plant, their homes, and the community to discover how the school, themselves, and the community could better help the war effort by conserving resources necessary for the war effort and to suggest what materials, now in scrap heaps, might go toward being used for the government's war

effort. In all the scrap drive they have taken an enthusiastic part. War bonds and stamps were sold by the Student Council, the treasurer having charge of the transactions.—M. Sonstegard, Principal.

18. Last spring the junior high school of Homestead, Pennsylvania ran a waste-paper campaign for sixteen weeks. During that period over forty tons of paper were collected by the pupils. If co-operation is needed in order to secure adjustments, the school pupils have certainly acquired that habit.—W. V. Campbell, Principal.

19. The art department of West High School of Green Bay, Wisconsin became enthusiastic over saving in small ways which would add up to big results. They campaigned to save paper, scraps, and electricity. Enough paper used on one side only was found to make fifty posters which covered the halls of the school and helped to make the student body saving-conscious. The city newspaper ran pictures of these. Pupils made a large oil painting of sea and sky and thirty-two model airplanes—each representing one homeroom. A scale of feet—each foot representing the home-room's sale of bonds and stamps is on the side, and a sign is over the painting "Keep 'Em Flying." Defense posters have been made similar to the professional posters now in every store. They were placed in the post office, drugstore, bank, and other prominent places of the town. Handmade by the citizens' children, they should benefit the war effort. The school also followed the rules of the national competition for war paintings and etchings and has made water-color paintings and ink drawings on phases of the war.—W. J. Harker, Principal.

20. The faculty of the Hill School, Pottstown, Pennsylvania found a real interest on the part of the boys in work well done. The breakage in the dining room has been less than when manned by paid employees, and from records, it is felt that the whole system tends to develop self-dependence, initiative, and a better appreciation of the school. This plan has in no way placed an undue burden on any boy, for the work has been divided in such a way as to make it possible for every boy to carry a normal schedule of academic, athletic, and extracurriculum activities. There has been less wasting of time and a more careful budgeting of a boy's daily program, which by reason of its intelligent application, has tended to increase his free time instead of decreasing it. The success of this self-help program has been augmented by the recognition of our boys that these changing conditions under which they now live will vitally affect their future. It has been found that they are doing some real and constructive thinking on ways and means to help themselves, and, in a deeper sense, the school and nation.—J. I. Wendell, Headmaster.

IV. HELPING TO RAISE FUNDS TO FINANCE THE WAR

C. L. GINN, PRINCIPAL

Smiley Junior High School, Denver, Colorado

The war-time program in this high school has been in charge of the Student Council and has been planned so that every pupil in the school could participate. Throughout the year they have sponsored the sale of Defense Stamps and Bonds, urging the pupils to buy from their allowances. These school sales have amounted to over \$2000.

One of the most successful war-time projects planned and conducted by the Council in co-operation with the faculty and the community was the "Salvage for Victory Parade." Every pupil in the school had an opportunity to contribute to the collection of scrap metal. To the stirring strains of a military march the pupils paraded to the platform and deposited the scraps. The collection netted about two and one-half tons.

The Red Cross contribution was another project so set up that every pupil in the school could do his bit. This contribution also came from the allowances of the pupils. The Red Cross box was placed in the lunchroom so that it would be convenient for pupils to contribute their spare change. A magazine and newspaper drive netted many pounds of waste paper for sale. A drive for library books for the USO gave another opportunity for school-wide participation in giving. The Smiley Carnival Parade took for its theme, "National Defense." It was the most spectacular and colorful war-time project. It served to introduce the defense stamp and bond sale.

In order to make the pupils more conscious of their country's call each Monday morning at nine o'clock the entire student body assembled in the auditorium to pledge allegiance to the flag. This was supplemented by the singing of patriotic songs. On Friday when the bell rang for the close of school each pupil arose and stood silently by his desk while the bugle sounded and the flag was lowered. This was very impressive.

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Every school has entered enthusiastically into campaigns for the sale of war-savings stamps and bonds. Not only have the pupils and teachers subscribed to the purchase of stamps and bonds, but they have also assisted in the soliciting of purchases from patrons of the school. Many schools have reported an effort on the part of the pupils to earn money for the purchase of stamps and bonds. In many instances this earning has taken the form of group action in which various functions are held within the school, the proceeds of which are invested in stamps and bonds. These were either given to the school, the Red Cross, USO, or other humanitarian agencies. Through these activities pupils not only become aware of the need for financial support to their government but they also receive excellent training in the planning and conducting of campaigns and of systematic

earning and saving. It also provides an excellent opportunity for a meaningful study of government finance, of inflation, of the effect of saving, of the need for reducing the severity of a post-war depression, and of the costs of war in terms of its demands on total economy and each individual. Likewise through individual and group contribution to humanitarian agencies they become aware of the work as well as the need for this type of service. The following accounts are typical representations of what schools are doing.

EXAMPLES OF ACTIVITIES

1. The John Deere Senior High School of Moline, Illinois last year sold over \$1900. worth of war-savings stamps. Many of the pupils have obligated themselves to buy regularly.—A. W. Wood, Principal.

2. The high school of Marshall, Missouri has provided a two-fold service in the sale of war-savings stamps and bonds—to encourage savings and to provide funds for the war effort. A complete program of administration has been worked out by the school. Stamp books are kept by the school. Each Wednesday stamps are obtained at the post office to be placed on sale in each of the home rooms during the fifth period of the day. At the end of the period the stamp books are placed in the safe. The stamps left over and the money are checked and deposited in the principal's office. A list of suggestions drawn up by the pupils show little economies that can be made so that the money saved by these economies can be invested in war stamps and bonds. Last year at the end of the sixteen weeks about \$2500. were raised.

3. The Girls' Preparatory School of Chattanooga, Tennessee, (611 Palmetto Street) with a student body of 125 have entered enthusiastically into the conservation and salvage program. They have saved tin foil and used stamps for the Red Cross. They have donated books, magazines, and phonograph records for the various military camps near Chattanooga. Last spring they voluntarily gave up their school annual. The money for this annual was returned to them in war-savings stamps. They volunteered to forego costumes for the May Day pageant; instead of sending corsages of roses to the director and pianist, they sent "corsages" of war-savings stamps.—Miss Tommie P. Duffy, Principal.

4. The Roosevelt Junior High School of Erie, Pennsylvania has a stamp store operating daily. Here pupils and faculty last year purchased more than \$2000. worth of stamps. The art classes have made posters for the bulletin boards in each classroom, in the corridors, and in the cafeteria to encourage pupils to purchase war-savings stamps.—H. C. Gillespie, Principal.

5. Weekly stamp sales in the high school of Hobbs, New Mexico have averaged around \$600. per month. The enrollment of the school is about 400 pupils. Stamps are sold one period each week.—T. C. Bird, Principal.

6. The East Senior High School of Rockford, Illinois through its student organizations is making every effort to help raise funds to finance the war.

Last year they purchased over \$2600. worth of war-savings stamps. Candy and popcorn sales were held by one room in order to buy defense bonds to donate to the Red Cross. A series of posters have been printed and distributed to all homerooms boosting the salvaging campaigns.—H. C. Muth, Principal.

7. The West Senior High School of Columbus, Ohio, pupils are buying stamps at the rate of more than \$100. weekly. Last year the graduating class invested \$75. in war bonds.—H. H. Rieghley, Principal.

8. The Student Government Association, the Student Co-operative Council, and the Maroon Marshall Club of the Lee Edwards High School of Asheville, North Carolina have been very active during the past year in school, civic, and national affairs. Although they set a goal of \$2800., they sold almost \$3200. worth of war-savings stamps and bonds. They sponsored the national Needlework Guild campaign in the school as well as the Red Cross drive. In order to keep in touch with similar student groups of other schools they sent delegates to the Southern, State, and District Congresses of Student Government Association.—Beulah R. Hoffman, Assistant Principal.

9. The elementary and high school of Okmulgee, Oklahoma had over 3100 boys and girls sign a pledge card followed by impressive ceremonies in which they pledged to buy war-savings stamps and bonds. During the second semester more than \$2500. worth of war-savings stamps and bonds were sold.—W. M. Chambers, Superintendent.

10. Wykeham Rise, Washington, Connecticut has 100 per cent Red Cross membership within its student body. It has entered actively into the buying of war stamps and bonds, and is sending money to the "Save the Children Foundation" to help an English boy.—Sara M. Gaither, Principal.

11. The Lincoln High School of Cleveland, Ohio began selling war stamps last year. For several weeks, the stamps were sold only during the home-room period through the Student Council office, and during the two lunch periods. When a red, white, and blue booth was completed by boys in the woodwork shop, and was placed in the lower hall, four members of the Student Council began selling stamps before the first class in the morning, during the home-room period, and during the two lunch periods. Weekly reminders about buying stamps were given with the morning announcements. Boys in the poster class have made posters to report progress, and sales through May 22 amounted to \$1390.30. The Red Cross drive in January amounted to more than \$500. The school enrolled 100 per cent in the Junior Red Cross drive. The donations of teachers and pupils in the "Bomber for MacArthur" drive amounted to \$387.74. From a high-school boy came the suggestion that the school boost the sale of stamps by organizing a Penny Victory Club, the student members to donate a penny a week to buy defense stamps which would be used to buy a bond for the school. At a subsequent meeting the Student Council adopted the plan.—C. H. Lake, Superintendent.

12. The school clubs of the Central High School of Chattanooga, Tennessee included war activities in their programs. The Junior Red Cross purchased splints for the first-aid work and sent attractive rag dolls to cheer the children of some of the war-torn countries. The Boys' and the Girls' Hi-Y clubs and the "Remember Pearl Harbor" Club sponsored the sale of war bonds and stamps.—S. E. Nelson, Principal.

13. The sale of bonds and stamps was conducted once a week at the high school in Marion, Virginia. For this purpose, booths were constructed on each floor. These booths displayed the flag and posters designed to encourage the pupils to save every dime possible. Savings was taught with a two-fold purpose: to curb inflation now, and to provide a cushion for the adjustment period which will follow the war. These sales held for 17 weeks amounted to almost \$2500. The pupils also made pledges to buy stamps during the summer months.—W. W. Wilkerson, Principal.

14. The sale of war-savings stamps for the Taylor Allderdice High School of Pittsburgh, Pennsylvania has been one of the most important projects for the year. This was introduced by home-room programs and various types of advertising in the daily bulletin and on the bulletin boards. At first pupils came individually to buy their own stamps, but there is now developed a system by which representatives of the home rooms buy them for the rooms. This has worked out very satisfactorily so that in a minimum of time it is possible to sell about \$350. worth of stamps.—R. G. Deevers, Principal.

15. The Hi-Y organization of the Sewanhaka High School of Floral Park, New York has held a campaign for gathering waste paper. Money received from this project was immediately turned into defense bonds. The Hi-Y sponsors the sale of defense stamps.—A. T. Stanforth, Principal.

16. At the beginning of the term last year at the Central High School, Bartlesville, Oklahoma, an all-year campaign for the purchase of defense stamps and bonds was set up within the mathematics classes. On December 18, a survey showed the amount of stamps owned as \$623.30 and bonds as \$7,450 maturity value. A final survey made on May 8 revealed stamps \$2,696, bonds \$21,425, maturity value.—M. W. Taylor, Principal.

17. The senior high school of Dubuque, Iowa "sparked" the county Red Cross drive for funds. Pupils and faculty pledged and raised \$750.32, while the interest and publicity aided greatly in the success of the main drive. During the second semester, the sale of defense stamps was promoted through the home rooms. The Girls' Athletic Association held a "County Fair" and invested the proceeds in Red Cross first-aid kits for the use of local stations. A fund of \$103.60 of the Class of 1940 with \$118.40 of the funds of the Class of 1942 was invested in war bonds for the school.—R. W. Johnson, Prin.

18. The Notre Dame Academy of Covington, Kentucky is proud of its

record sale of war stamps amounting to \$400. in only five months time. Total enrollment is little over three hundred pupils, the majority of whom come from large families of very moderate income. In every case the purchase of these stamps has been the result of sacrifice and saving on the part of the girls themselves—it is not a matter of securing money from their parents for this purpose.—Sister Mary Agnetis, Principal.

19. The Senior High School of Tucson, Arizona donated \$20. to Emergency Relief, and \$10. to the National Children's Fund. Likewise the Student Council raised \$25. towards the Arizona Bomber Fund, which was the state's answer to the loss of the battleship "Arizona."—C. A. Carson, Principal.

20. The pupils of the Community High School of Pekin, Illinois have entered enthusiastically into the sale of war stamps and bonds. Regular purchases were secured from parents, pupils, and faculty.—A. G. Haussler.

21. War stamp and bond sales in the high school of Alpine, Michigan last year amounted to over \$8000. This work was conducted principally by pupils and was entered into enthusiastically by all.—C. E. Hinchey, Principal.

22. The Lincoln High School of Des Moines, Iowa, through school plays and contributions from benefit baseball games raised \$100. This money was invested in victory bonds. This campaign was part of the Victory Fund Project which was organized by the school. This project not only included the school but the entire community. Students gathered on three consecutive days into the assembly at which time free-will offerings previously collected through the home-room units were accepted. At the first assembly "Sammy," a puppet who climbed a giant thermometer, was introduced. After contributions were accepted, "Sammy" climbed higher on the thermometer. When the three-day drive ended almost \$400. was collected. \$200. of this amount went to the Red Cross. \$91.80 was used to buy thirty chairs for the USO. Some of the fund was used to pay for copies of the school paper which was sent to every Lincoln boy in service and the balance was used to buy a service flag.—Marjorie Macfarland, Principal.

23. During May, 1942, the High School Student Association of Hammond, Indiana conducted a 100 per cent day of all-out participation in the war effort. The work of regular committees on war-time activities was co-ordinated and a preliminary campaign carefully planned well in advance. The objectives of the day were: 100 per cent school attendance, every pupil buying a stamp or a bond, and every pupil's bringing at least one pound of paper for the salvage collection. Enthusiasm for 100 per cent day was developed in home rooms, through the student paper, and by posters in classrooms and hallways. The results exceeded all expectations when more than 97 per cent of the pupils co-operated. Attendance was the best of the year. The total of the bonds and stamps sold in this one day amounted to \$1,245.60. So much interest was aroused that when solicitors called, every advisory signed a Minute-Man

pledge to continue the weekly purchase.—C. T. Coleman, Social Science Dept.

24. The junior high school boys of the University School of Cleveland, Ohio threw themselves enthusiastically into the sale of stamps and bonds. They, with the lower-school boys, sold a total of \$118,000. (cost price) of bonds and stamps before the end of the school year. One of the best jobs they did was the solicitation of everybody in the school to sign a pledge to buy weekly or monthly a set amount of war stamps and bonds. The results of that campaign were 100 per cent for the faculty, 97½ per cent for the other staff, and something over 85 per cent for the total membership of the school.—H. A. Peters, Headmaster.

25. The high school of Prescott, Arizona is justifiably proud of its record in the sale of war stamps. Entirely student sponsored and administered, through a committee appointed by the student councils, the sale of stamps began seriously, albeit somewhat inauspiciously, in January of this year. Adopting the method of weekly individual contact through home-room representatives, sales assumed increasingly impressive proportions. To such an extent was this true, that the student body of four hundred and fifty had sold in excess of \$1,150 worth of stamps by the end of the school year. This, of course was exclusive of purchases by the school personnel.—H. T. Cox, Principal.

26. In order to increase the sale of war stamps in the Drury High School, North Adams, Massachusetts, home-room competition was stimulated by "minute men," who went about from room to room where sales were not 100 per cent. Whereas there were no 100 per cent rooms when the school sales began, twelve out of twenty-two became 100 per cent, and 80 per cent instead of 33 per cent of all pupils.—D. W. Fowler, Principal.

27. The Arthur Hill High School (Saginaw, Michigan) pupils had purchased war stamps and bonds in the amount of \$8,218.35 as of February 26, 1942. They also sponsored a victory dance with admittance by war stamp. The Board added enough to the \$100 earned to buy two one-hundred dollar war bonds.—I. M. Brock, Principal.

28. Pupils of the Royster Junior High School in Chanute, Kansas wanted and needed more positive and more immediate ways to take an active part in service of some kind. To meet this need there was organized a Defense Planning Board to provide activities in which pupils might take part, and to maintain morale. This board was composed of faculty and pupils, chairmen of the following committees: Bond and Stamp Sales, Health and First Aid, Special Skills, Emergency, Americanism, and Conservation. Through this organization, worth-while activities are being carried on. The Bond and Stamp Sale committee has carried on a continuous stamp-sale campaign. Pupils bought between \$2,000 and \$2,500 worth of war stamps. A large per cent of the pupils continued their stamp purchases during the vacation months.—E. W. Grigg, Principal.

V. INCREASING EFFECTIVE MANPOWER BY CORRECTING
EDUCATIONAL DEFICIENCIESA. C. HEARN, PRINCIPAL
High School, Mt. Shasta, California

One of the positive by-products of a period of war is that certain shortcomings of education are brought emphatically to the front. The last war, for example, pointed out clearly the physical deficiencies of our population. This revelation resulted in more adequate, though still far from perfect, health and physical education programs in our schools. Certainly, too, much of our progress in the field of testing traces its origin to the First World War.

The outbreak of the present war has likewise brought to the nation's attention certain shortcomings, many of which can be laid directly at the doors of our schools. What are their implications, and how can such implications be handled in the school curriculum? Consider the field of mathematics, for example. Recent army and navy bulletins paint a sorry picture relative to the ability of secondary school and college graduates in this field. Two major objectives are submitted for consideration here: (1) *all* pupils should acquire a certain minimum degree of competence in handling numbers; (2) those pupils who demonstrate aptitude in mathematics and who show promise of success in a field in which the subject is basic should be encouraged to go as far as possible in it. Heretofore we have perhaps confused the university's *required minimum* of algebra and geometry with an *adequate* mathematical training, which would at least include, in many cases, advanced algebra and trigonometry as well. The related field of science presents a similar picture. The chemistry of gases, and of bombs and their control, and the physics of radio have unusual significance today. Some of these, and other related topics, will be none-the-less important in a world at peace.

The need for trained commercial students is particularly acute at the present time. In addition to valuable instruction in commercial subjects for personal use, are we accomplishing the desirable vocational outcomes as well, or have we allowed our commercial departments to degenerate into dumping grounds for the school's clerical work?

AN EDUCATION FOR ALL

In a country demanding what it does of all the children of all the people, are we assisting our youngsters to achieve to their maximum capacity in ability to handle the English language, or are we merely requiring pupils to pass the required minimum of courses and letting it go at that? With the barrage of material which reaches us through the media of press, moving picture, and radio, among other agencies, the necessity of understanding this material, and of culling the chaff from the wheat, is obvious, and carries with it definite implications not only for curriculum in English but for other departments as well.

In the field of the foreign languages, there has been a definite swing towards certain tongues, such as Spanish, and a corresponding movement away from others. The possibilities for correlation between language and other departments in the secondary school should not be lost sight of. A recent issue of the *Sierra Educational News* carries a description of a project presented each year in the Red Bluff High School. The Spanish department presents a Pan-American program, cutting across traditional subject-matter boundaries and bringing to the entire student body and community a rich appreciation of the ideals of Pan-Americanism.

In physical education, the well-known shortage of trained personnel and the difficulties imposed by the rubber situation are only too obvious to us all. In spite of these handicaps, however, it is essential that our physical education programs maintain just as high standard as the circumstances will permit. Intramural programs will come into their own, and many teachers and principals outside of the field of physical education will have to help take up the slack. Instruction in health and first aid is, of course, more important now than ever before.

CITIZENSHIP TRAINING

The development of citizens in a democracy can be encouraged in at least two very important respects. Actual instruction in the ideals of our country should permeate the entire curriculum, but will no doubt receive greatest attention through the medium of the social studies. Although the Axis Powers have capitalized to a marked degree through indoctrination in behalf of their own particular ideologies, it seems that we in America have in some respects missed the boat. One wonders whether ten semester periods of United States history as the only instructional material required for a diploma, as is true in some high schools, can be considered as being much more than the payment of lip service to the democratic process.

This is by no means meant to imply that good citizenship can be achieved merely by reading about it. For one thing, the ingenuity of the instructor can bring about far more than a question and answer type of situation in the social studies classroom. But to have any chance of helping our youth grow in the democratic tradition, the entire school situation must typify democracy at work. The autocratic administrator preaching democratic principles has no place in such a scheme. The spirit of democracy must be present from the top down, and must include administrators, teachers, and students.

Time does not permit a detailed discussion of all the other fields of knowledge which characterize the modern high school. The importance of trade and industrial courses has been treated at length in many publications. Music certainly has its place in the building of morale. Literature, art, home making, and other subjects all have their contributions to make. In short, we, as administrators, must work out in co-operation with our colleagues the

implications of the present crisis for each part of our school curriculum. May the educational gains be many and lasting, and may our profession do its full share in the task of establishing a better and stronger democracy.



In all probability there is no secondary school that has not given careful scrutiny to its program. Curriculums have been expanded or adjusted to meet the present-day needs. In this adjustment program one of the criteria that seems to determine the changes in the schools' program is that arising out of consideration given to the problem of correcting educational deficiencies. Courses of study have been changed so that more attention is given not only to the development of general basic skills but also to the development of special skills and abilities arising out of war-time needs.

Faced with the army's statement "that physically-fit men in the draft disqualified for military service solely because of inadequate education would have constituted fifteen army divisions," the schools are making an all-out effort so far as they are humanly and financially able to reduce the number of persons among future soldiers who will have less than a fourth-grade education. The fact that the 1940 census shows that 13½ per cent of the nation's population over 25 years of age had not attended school beyond the fourth grade together with the army's announcement concerning the inadequate education of many of the drafted men tends to emphasize the need not only for an intensification of the schools' efforts but more particularly the need for greater financial support to the schools.

The following descriptions represent changes that have taken place in the curriculum of the school. Basically these changes have been effected with the one idea—that of correcting educational deficiencies and thus providing a most practical instruction to meet present-day demands. The heavy burden rests upon the school not only in the development of certain technical skills but also in teaching reading and writing to this large group that has an education of less than the fourth-grade level.

EXAMPLES OF ACTIVITIES

1. The war-time program at the Westerly, Rhode Island, High School may be described as two-fold co-operation with the needs of the army and the navy, and co-operation with the needs of national defense. An effort had been made to analyse educational deficiency and through curriculum adjustments provide more pupils qualified for the air corps and other services. To this end, important changes have been made in the curriculum with the intention of providing opportunity for more pupils to elect senior mathematics which will include solid geometry, plane and spherical trigonometry, some navigation and some elementary calculus, and physics. A course in elementary aeronautics has been introduced in the general curriculum in the continued effort to provide instruction related to the mathematics and physics of flight. Practical

mathematics has been substituted in one sophomore division for plane geometry in an effort to provide mathematics necessary for pupils who will probably become employees of some industrial plant. More arithmetic of a practical nature has been added to the business courses. Courses in mathematics, aeronautics, shop work, and blueprint reading were offered last summer in evening school classes. Many pupils enrolled in these classes have since enlisted in the army air corps and others are now employed in defense industries.—C. E. Mason, Principal.

2. Realizing the importance of our national problem and the need for reducing educational deficiencies, the social science classes of the West High School of Green Bay, Wisconsin have attempted to accomplish certain definite objectives. In the study of economics, pupils are taught to realize the nature of a problem created by war and also the post-war period. In the study of sociology they are taught to realize the various social problems created by war and to develop solutions for these problems that will be a benefit to society as a whole.—W. J. Harker, Principal.

3. A course in aeronautics will be offered this year by the high school of Marshall, Missouri in line with suggestions made by the Federal and state departments of education. No definite qualifications have been set for pupils taking this course, but the following are desirable: age of seventeen now or by Christmas, one year or more of algebra and plane geometry, be a senior, courses in science or industrial arts highly desirable as prerequisites. This course will meet the science requirements for graduation. Expansion in the mathematics and science departments during the next few years is being planned. Application to aeronautics will be stressed, especially in such courses as plane and solid geometry, advanced algebra, and physics. Various exercises and drills of a military nature will be used in physical education classes. Many other departments will alter portions of the regular course and intensify others as needs arise in an effort to correct educational deficiency and thus increase the effectiveness of our manpower.—A. H. Bueker, Principal.

4. In an effort to make the curriculum of the Roosevelt Junior High School at Erie, Pennsylvania as practical as possible a careful study of it has been made with the thought in mind of detecting possible educational lacks within the program. The English course has been revamped giving emphasis upon composition, oral reports, and current-events readings—all of which are related in so far as feasible to war-time topics. Algebra has been added to the mathematics course. The science classes give more time to demonstration and the discussion of principles of aerodynamics. Units in the study of South America have been incorporated in the social studies program. The vocal music department is including a number of patriotic songs, old and new, for group singing both in classes and in assemblies. The work in the printing shop has been on a production basis, that is, printing messages to the pupils

and parents designed to stimulate interest in the promotion of the war effort. The guidance program has been modified to make provision for group guidance in connection with agricultural work for pupils over fourteen years of age and to make provision for the expanded interest in and the demand for skilled mechanics. Geography classes have followed the current interest in Pacific affairs as well as our "Good Neighbor Policy," in Central and South America. The foods classes have incorporated menus designated to provide an adequate diet for people operating on a limited sugar ration as well as on a reduction in the use of fats. The clothing department has emphasized the use and conservation of clothing materials with special emphasis given to the matter of shortages.—H. C. Gillespie, Principal.

5. In their geography work the seventh grade of the Girls' Preparatory School of Chattanooga, Tennessee made war notebooks, in which were featured war heroes. The eighth grade in biology emphasizes nutrition. The upper classes in their history course paid special attention to the Constitution and the Declaration of Independence. All classes devoted time to current events to keep them abreast with the times. Even in Latin the girls made patriotic posters with Latin captions; one of particular interest was the pledge of allegiance to the flag in Latin. All of the English classes wrote patriotic essays on "The Characteristics of a Good American" in a contest sponsored by the Daughters of the American Revolution and the American Legion Auxiliary. In literature, stress was put on patriotic poems and stories describing the lives of the great men and women of America. Strange as it may seem, every girl can sing all three stanzas of the "Star Spangled Banner." All of these points of emphasis have been made with the view of reducing any educational deficiencies within the school.—Miss Tommie P. Duffy, Principal.

VI. PROMOTING HEALTH AND PHYSICAL EFFICIENCY

ROBERT S. KENDIG, DIRECTOR OF PHYSICAL EDUCATION
High School, Highland Park, Illinois

The obstacle course that has just been developed and incorporated as a part of the regular physical education program for boys for health and physical efficiency in the Highland Park, Illinois, High School, has its counterpart in such courses that are now found in the army camps as a feature of the conditioning program there. Constructed at the edge of the school property in a deep wooded ravine that has always been considered useless because of the character of the terrain, the course is so laid out that to traverse the distance successfully requires a mastery of fundamental skills such as running, jumping, climbing, balancing, and vaulting. It is difficult enough to demand a physical output sufficient to bring about increased strength and endurance.

The deep sides of the ravine and the rugged nature of the area, coupled with the constructed obstacles present a real challenge to the physical effective-

ness and co-ordination of these urban boys who have done practically all of their playing, running, and walking on level sidewalks, streets, playgrounds, and gymnasium floors. To develop fundamental skills, the steep sides of the ravine offer experience in climbing and descending steep inclines. A small creek runs through the bottom of the ravine, and obstacle pools were formed here and there by damming up the water.

The course was designed and constructed with the following in mind:

1. The obstacles erected must require mastery of fundamental skills as near as possible to those encountered in traveling across country or over wild and rugged terrain.
2. The course must develop the strength and endurance of the participants not only in the legs and trunk, but shoulders and arms as well.
3. Some of the obstacles to be overcome must require courage without too much danger to the participants.

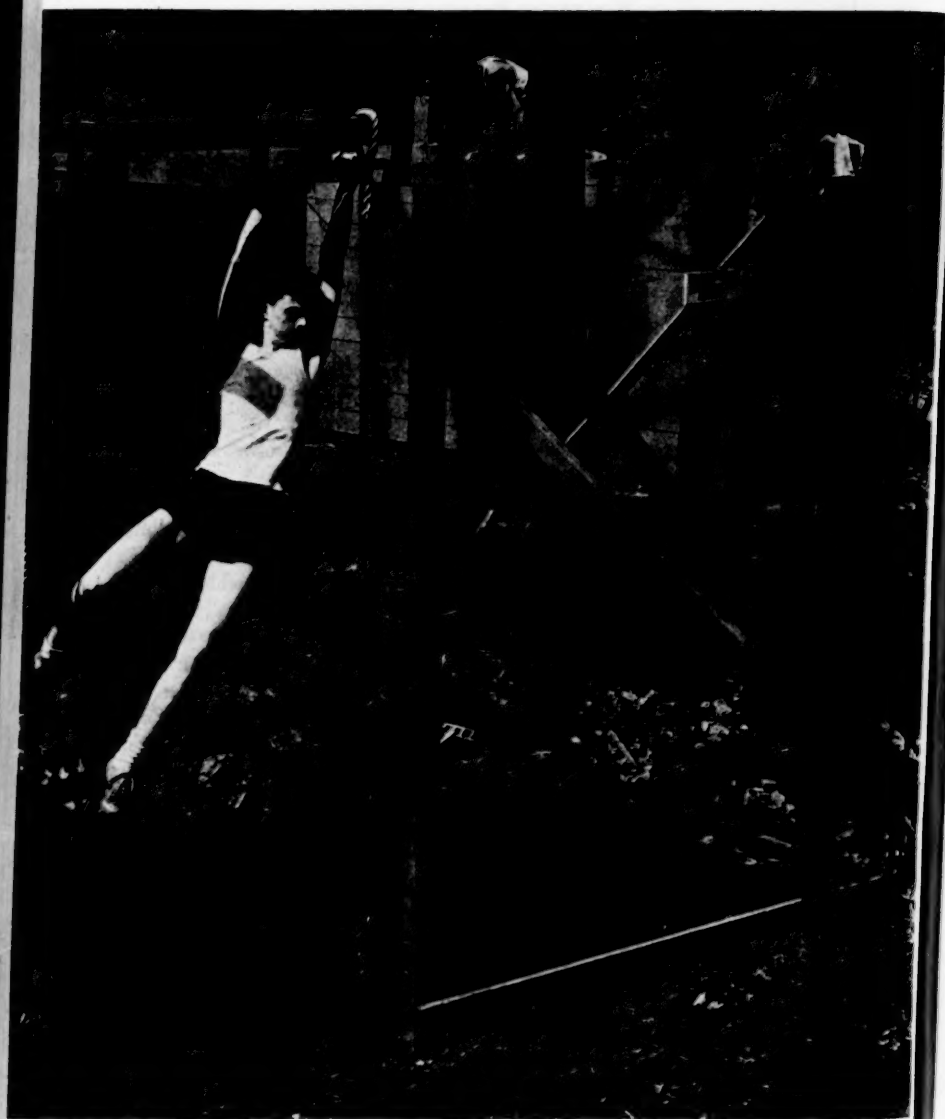
RUNNING THE COURSE

The course begins with a twenty-five foot descent down one side of the ravine, so steep (over 45°) that the participant cannot turn back once he has started. At the bottom of this is a pool of water which must be crossed by grasping one of two long ropes and swinging to the opposite bank. Falling, missing the rope, or trying to stop before grasping the rope means landing in the creek. The fact that a boy cannot stop once he has started, combined with the fine sense of timing required to grasp the rope, which is usually moving due to the swing of the preceding boy, makes this event one that requires courage as well as precision and muscular co-ordination.

On up the course from the creek, a four-foot concrete retaining wall forms a good parapet onto which to jump or vault. Next come up-and-down ladders, twelve feet high, with the rungs two feet apart. It now appears that these ladders would provide better activity if the rungs were about three feet apart.

Logs felled across the creek present an entirely different type of challenge once the boy has descended the ladders. It is surprising to note the number who at first cannot walk a twenty-foot log across a stream. Following another turn up the same side of the ravine and down, the boy confronts a seven and a half foot scaling wall, which must be surmounted without assistance, a difficult feat when a boy has started to tire a little.

To provide strenuous exercise for the arm and shoulder muscles he next has to travel over twenty-foot horizontal ladders at one end of which is a rope to descend or ascend by. Due to the fact that one bank of the creek is high and the other is low, the end of the ladder to which the rope is attached is about twelve feet from the ground. Boys can be sent through this apparatus either way. Climbing the rope to reach the rungs and then traveling across the ladders provides the best workout, but is too difficult for the poorer developed boys. Once the obstacles in the ravine itself are covered, the boy finds



There's always that pesky water to get across in the obstacle course that makes boys physically fit at the Highland Park, Illinois, High School.

ropes hanging down the other side to help him ascend and thus complete his course.

EVALUATING THE OBSTACLE COURSE

The obstacle course has been in use since about six weeks before the close of last school term with the following results:

1. It has aroused and held the interest of the boys to the extent that many of them want to practice on it during the noon hour and after school.
2. It provides a much better workout than calisthenics given for the same length of time, and has the added advantage of teaching fundamental skills.
3. It has brought about a noticeable improvement in shoulder development, endurance, and confidence.
4. It provides exercise that is strenuous enough to permit a class to be out of doors in much colder weather than would otherwise be possible.

The original idea was to have this activity used only by senior boys. However, sophomores and juniors clamored so to be let in on the activity that they were allowed to try it. The whole course proved to be too difficult for many of the underclassmen, but by leaving out the rope swing we found that they could stand the shortened course very well.

Overweight boys, under-developed boys, and those with poor eyesight are not permitted to participate. The activity is not used in the program for freshmen boys. It would be a mistake to claim that a panacea has been discovered in this obstacle course or steeplechase. It does appear, however, that we have overlooked a valuable type of activity that could well be included in our curriculum to advantage. In the Highland Park High School, where physical education is required for all four years, the obstacle course is used to supplement the program of sports, games, and swimming.

SUGGESTIONS

1. Don't give up the ideal of building an obstacle course just because you don't have a ravine. Most of the army courses are built on level ground. If there is a piece of vacant property near your school use your ingenuity to see what you can make out of what you have to work with.

2. Don't try to level everything off smooth so that there will be no possibility of any one stumbling. One of the values should be to give experience in traveling over rough ground.

3. Water hazards are a great asset. For some reason people seem to be able to perform superhuman feats just to keep from getting wet. A boy who will not hesitate to walk over a ditch or a log meets an entirely new situation in crossing the same ditch when there is a little water under it. We found that some of our boys who could not travel ten feet on a horizontal ladder in the gym had no difficulty in traveling twice the distance when there are six inches of water under them.

Above all, don't devise a course that is so safe that there is no element of danger in it. Someone once made a statement to the effect that man seeks safety and security—what he needs is action and adventure.

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The startling announcement by the Selective Service Board that more than one-third of the men examined were found physically unfit for military service gave objective evidence to the need for a more effective type of health and physical education program in the schools. Schoolmen have for years pointed out the need for this program. To a great extent due to the lack of funds, the public generally was apathetic to the development of good health and physical education program within the schools. Now that these deficiencies have been startlingly revealed, schoolmen throughout the nation have public support to a need to which so many people turned a deaf ear. The school program not only gives attention to scientific instruction in personal and public hygiene but also to the development of physical efficiency through a program including sports and other recreational activities, the correcting of physical defects and the building of strength and vitality among its pupils.

In other sections of this report it will readily be seen how other parts of the school program are related to the health and physical education and are contributing to the physical efficiency of pupils. Courses in first aid, nutrition, child care, and instruction related to the physical well-being of the pupils have been introduced or extended in a large number of schools.

It is interesting to note that very few schools have reported the introduction of military training into the high school as a war measure. This seems to bear out the general impression that at the present at least further extension of the existing military training programs in the high schools is not being made. It may also indicate that a large group of schoolmen do not believe that military training should become a common part of the secondary-school program. The following accounts are examples of what almost every school is doing to develop a physically efficient student body.

EXAMPLES OF ACTIVITIES

1. The Washington, D.C., public schools this fall embarked on the most vigorous physical fitness program in their history. This program will provide many more physical education instructors and more doctors and dentists. Instead of two periods of physical education each week in the senior high schools, five periods a week will be given. In order to inaugurate this expanded program 45 physical education teachers, five medical inspectors, 6 dental hygienists, and four part-time dentists have been added to the program. In addition plans are under way to set-up two dental clinics as a part of the school's expanded dental-health program. The District's entire physical education staff now totals 164 teachers. Each secondary-school pupil will receive at least 36 periods a semester of instruction in such subjects as nutrition, per-

sonal appearance and hygiene, Red Cross first aid, and social health. Three periods each week will be devoted to games and calisthenics and two periods to lectures. Those passing the first-aid course at the end of this semester will receive a Junior Red Cross certificate. The girls passing the home-nursing course will receive a Red Cross home-nursing certificate. While the girls are studying home nursing, the boys will study traffic, occupational, and recreational safety. The lecture part of the course for the senior high school pupils is as follows: 10-A, functional physiology and anatomy; 10-B, nutrition; 11-A, personal hygiene and personal appearance, relaxation, alcohol, narcotics; 11-B, first aid; 12-A, home nursing for girls, safety for boys; 12-B, mental health and social relations. Separate classes will be provided for boys and girls throughout the entire course.—H. L. Pearce, Acting Director of Physical Education.

2. In the Cathedral High School of Wichita, Kansas increased emphasis and instruction is given to the subject of health as a means to build up the pupils spiritually, mentally, and physically as a part of their health and physical efficiency program. Religious training, band, orchestra, and voice training are included in this instruction.—Sister Dorothea, Principal.

3. The athletic and physical education program of the St. Raphael Academy, Pawtucket, Rhode Island has been expanded with the view of increasing the physical fitness of pupils of this school. As a climax to last year's program, a special baseball game was played. The proceeds from this game were sent to the President of the United States in the form of cancelled war bonds.—Brother Thomas, Principal.

4. As a part of the physical-fitness program of the John Deere Junior High School, Moline, Illinois, a large percentage of the student body have been immunized and vaccinated. Continued emphasis on this phase of the program is being made during the rest of the school year.—A. W. Wood, Principal.

5. The high school of Chandler, Oklahoma has expanded its physical education and recreational program. Special emphasis on the physical fitness of every pupil within the school is being made. As a result pupils are becoming conscious of their duty to keep physically fit.—J. O. Bumpas, Principal.

6. At the high school of Hobbs, New Mexico all the boys are given a thorough physical examination through the co-operation of the medical doctors in the city. Following this examination each boy is required to enroll in one hour of military drill during the day. These boys are in the charge of the physical education teacher. They have given several marching exhibitions for the New Mexico Home Guard Unit and are excelling this group of veterans in marching and maneuvers.—T. C. Bird, Principal.

7. Increased emphasis upon physical education is characteristic of the high school in Charleston, Illinois. The knowledge that approximately 45 per cent of the men called into service as a result of the *Selective Service Act*

are found to be physically and mentally unfit provides a good spring board for this instruction. This year it is planned to have five periods in each week of physical education for each pupil. The school is earnestly endeavoring to build healthy bodies among its student body. It hopes intelligently to prepare its youth for the days that lie ahead.—E. L. Harden, Principal.

8. At the West Senior High School of Columbus, Ohio one hundred thirty-seven boys and girls last year volunteered to take instruction in first-aid training. This was given by the physical education teacher.—H. H. Rieghley, Principal.

9. At the outbreak of the war, the department of physical education of the high school in Prescott, Arizona instituted the plan of giving the basic first-aid course to all pupils enrolled in that field. To augment this program a course in home nursing was started at the beginning of the second semester. Soon both boys and girls and physical education teachers themselves were used as instructors in first-aid courses given in the community. In approximately twenty-five such classes, pupils and faculty were active as pupils or teachers.—H. T. Cox, Principal.

10. The East Senior High School of Rockford, Illinois has given attention to adjustment in the program of health and physical fitness. Immunization is now available to all pupils. The war has served to intensify this program. As a result, a more rugged type of physical development program for the boys has been provided. Wider student participation in competitive athletics has become part of the intra-mural program.—H. C. Muth, Principal.

11. The Lewis Consolidated School of Monument, Colorado now has compulsory physical education for all secondary-school pupils.—Gentry Stewert, Principal.

12. The Jackson County High School of Colorado has enlarged its physical education program to five days a week, added first aid, hygiene, and corrective health work, and has supplemented the curriculum further with advanced mathematics courses, art instruction, and shorthand.—Grace W. Mathews, County Superintendent.

13. Home economics classes at the West High School, Green Bay, Wisconsin stress the principles of nutrition, so that pupils will have a thorough knowledge of good diet and its relation to health, thereby enabling them to plan meals that will cut down food expenditure and still add to the physical fitness and health of every member of the family. It is a victory job to stay well. Girls are taught to buy carefully, take excellent care of equipment, and to waste nothing. New and more practical methods for doing routine household jobs are taught them for budgeting time, allowing more time for Red Cross and other defense work. This year the school hopes to use the surplus farm commodities in its cafeteria and thus feed many under-nourished and hungry pupils.—W. J. Harker, Principal.

14. All pupils in the Taylor Allderdice High School, Pittsburgh, Pennsylvania are receiving either the junior or senior first-aid training in their physical education classes. The program in physical education has been modified to give more strenuous physical training, especially to the boys of the upper classes.—R. G. Deevers, Principal.

15. The Arthur Hill High School in Saginaw, Michigan, is trying to avoid too great a swing toward the all-out military routine for boys and girls physical education. However, thinking that it may have departed too far from formal work in the past, it is now revamping its program into an all-rounded schedule for health and physical fitness.—I. M. Brock, Principal.

16. This year the Lincoln High School of Cleveland, Ohio has changed its regular physical education classes considerably, due to the war. It is stressing the development of the large muscles of the body in preference to the co-ordination of the smaller muscles. All the pupils start every class out with a distance run and follow it up with suspension exercises to develop their shoulders and abdominal muscles. At every opportunity the school tries to make its pupils proud of their posture, their health, and their various abilities. This year, for the first time, all pupils are taught certain phases of first aid that are adaptable to physical education classes.—C. H. Lake, Superintendent.

17. Foremost of the curriculum changes in the Evanston Township High School of Evanston, Illinois has been the increased emphasis upon physical fitness. The alarming percentage of rejections for military service because of physical defects and the staggering total of man-days lost in industry because of illness have brought home to the school the importance of health as never before. First step was to determine the extent of physical deficiencies in the school. A survey of physical examination figures (all freshmen and juniors, members of the M. T. C., and candidates for athletic teams being examined each year) showed the following defects: defective teeth, boys—11.6%, girls—20.0%; defective eyes, boys—17.0%, girls—24.0%; defective ears, boys—1.4%, girls—1.4%; defective feet, boys—7.4%, girls—9.6%; nutritional defects; boys—11.4%, girls—19.7%; diseased tonsils, boys—11.0%, girls—14.0%; nervous diseases, boys—0.2%, girls—0.8%; hernia, 2.2%; abdominal, 2.3%.

The next step was to take suitable action to correct and control the deficiencies revealed. The co-operation of Evanston dentists and doctors was secured for a plan of examining and treating defects disclosed. Pupils were interviewed by their physical education instructors, given a card indicating the nature of the defects they possessed and instructed to see their family physician or dentist to have the deficiency corrected. Following correction the card was to be returned to the school's health department. For pupils unable to finance such care, funds were made available through the Health Loan Fund. Desirability of securing early attention before doctors and dentists were drawn into the service was emphasized. Pupils and parents co-operated spln-

didly in this plan, much better than ever before. The school follow-up was also much better done than in previous years.

In the physical education classes themselves greater emphasis has been placed upon body-building exercises, and the intra-mural athletics program for both boys and girls has been extended. A special steeplechase course with a number of distinctly varying hazards was built upon the athletic field, and daily the physical education classes were put through this course as a particular method of toughening up muscular skills.—F. L. Bacon, Principal.

18. In an effort to dramatize the importance of the health of the high school pupils in the community's war effort, the principal of the West High School, Rockford, Illinois appointed a committee of seven faculty members and six pupils keeping in mind an equal representation of the sexes so that appeals might be made to both boys and girls. The large committee subdivided into smaller groups that each member had one phase of the program to develop. The following paragraphs describe the work of each subcommittee whose chairman, a faculty member, worked out activities with pupil members of varying grade levels. Inasmuch as a victorious nation must be a healthy nation, one of the first points of attack in the campaign was calling attention to the eating habits of the pupils with emphasis upon the right things to eat. Cards with a "Pledge for Health" on one side and daily food requirements on the other were distributed to each pupil. These cards were printed in patriotic colors and with attractive typographical set-up.

A local dairy association and meat dealers paid for some very attractive posters and educational materials which were widely used. Faculty as well as pupils became very much conscious of luncheon choices as their trays were scanned by their neighbor's appraising eye. As the nutrition work was in charge of the cafeteria director, a foods teacher, and the school nurse, so the first aid was directed by the girls' physical education head and her assistants. The school nurse directed all of these activities as committee chairman. In addition, she participated in what developed into a very important phase of health work both in the secondary school and later in the community for boys and girls of all ages. This was known as the immunization program. An immunization survey was made of the student body, as directed by the school physician and county medical society. Pupils were urged in their physical education classes and in ROTC to become protected against small-pox and diphtheria. A local physician addressed the entire student body. An exhibit stressing the importance of being protected was placed in the exhibit case. The school nurse worked Saturday mornings in the clinic conducted by the medical society. The response was fair, especially for small-pox vaccination, a total of two hundred being vaccinated.

One of the most interesting features of the Health Committee's program of activities was an all-school assembly in which there was a technicolor and

sound movie entitled *Happiness Through Health*. This natural picture of boys and girls of the teen age, as they enjoyed their out-door sports and became attractive specimens of good health and resultant vitality, impressed the pupils very much. During the assembly period, a senior girl gave a very interesting but informal and brief discussion of "Health and the High-School Student."

In the meantime classroom activities were not overlooked as the science department head and his assistants put special stress upon certain features of the "Health Campaign" in a natural but effective way. In the biology classes complete units of health teaching were included. These covered material on foods and diet, a study of healthful and harmful bacteria with a review of the achievements of such men as Pasteur, Lister, and Jenner. Other units were devoted to the prevention of control of disease, work of health departments and the value of hospitalization insurance. The influence of heredity and genetics in the betterment of the human race was emphasized. In many other courses health teaching is always an integral part of the content, to mention a few: home economics, chemistry, physics, and botany. Allied activities which grew out of the plans of the committee called attention of the other teachers and visitors to the work and objectives of the campaign. A display of health work was exhibited at the time of the County Institute. Other exhibits have been prepared, one on immunization, a vocational guidance for nursing, and one on nutrition. The school paper was used freely. Special articles and editorials have been written. Each week a "Healthgram" has been displayed. Rockford newspapers also ran a feature article which included pictures on the work.—J. E. Blue, Principal.

19. The local American Legion of Fryeburg, Maine organized a home guard unit which was composed mainly of the boys who lived in the Academy dormitory. This group was given courses in the fundamentals of army discipline, marching, the manual of arms, and other techniques. Its object was to accustom the boys to military training.—A. N. Berry, Principal.

20. One of the most ambitious summer recreation programs was provided for this year when the physical education instructors of Central High School, Bartlesville, Oklahoma, were retained during the summer by the Board of Education to organize and supervise playground and recreation activities. Working in co-operation with the YMCA, YWCA, and community-center projects, unusual opportunities have thus been provided for boys and girls from the ages of 8 to 16.—M. W. Taylor, Principal.

21. On January 7, 1942, the University High School of Cleveland, Ohio started a military training program. Four 45-minute periods are held weekly. 260 boys of the senior high-school years have enrolled in these classes. Special attention was given to close-order drill and in-door military activities. They progressed sufficiently well to allow for the selection of acting commissioned

and non-commissioned officers for two battalions that were organized this fall. The junior high school of 100 boys has been organized into four platoons. The boys in this group are likewise given close-order drill work as preparatory to their senior high-school program. A new course in radio was organized with 30 boys enrolled. Standard army equipment for sending "teleplex" was used in the course. Another group of boys joined in model construction and operation. A rifle practice group is training in marksmanship and understanding of the operation of a rifle. A course in war chemistry, relating to gas bombs and the like, has been introduced. When the pupil is graduated, a certificate is issued to the pupils successfully completing any or all of these special or expanded courses. These courses are listed on the certificate; radio, motors, rifle, meteorology, first aid, air raid, military training, work program, war chemistry. The certificate classifies these courses as material activities and certifies that the pupil has received instruction in those courses. It is signed by the headmaster and the director. These certificates are presented as a part of the Commencement Day program.—H. A. Peters, Headmaster.

22. The state department of public instruction of Michigan through its state superintendent has issued some aids to schools of the state. It has suggested that modification of the school program should provide special extra-curriculum health service and community service in order that the student body may prepare itself to meet the demands of the armed forces, industry, and community services. Changes in curriculum programs recommended for immediate adoption by the schools include many points of emphasis such as the following:

Mathematics, with problems drawn from the fields of aviation, navigation, and industry; **auto-mechanics**, with emphasis on repair and operation, and in co-operation with local garages and farmers; **physics**—mechanics, heat, radio, photography, and electricity; **industrial arts**, related to war needs and with special application to the operation of tools; **household arts**—cooking, sewing, homemaking, home management and child care; **social study courses** to include an understanding of war aims and world-wide economic problems involved in the war and in preparation for permanent peace; **preliminary courses** to facilitate the entrance of boys into the armed forces and girls into industry or other branches of community service; **health courses and services** to increase physical fitness, correct physical deficiencies, and encourage better health practices.

Participation in community activities such as salvage drives and development of community resources for recreation, physical fitness and the prevention of delinquency were urged to the end that "every schoolhouse shall become a service center for the home front."—E. B. Elliott, Superintendent.

23. The Ingalls Junior-Senior High School of Atchison, Kansas places increased emphasis on the health and physical education program for the senior boys who do not participate in athletics.—G. L. Cleland, Principal.

24. The usual requirements of one year of Health and Physical Education in the Senior High School of Tucson, Arizona has been raised to three years. Courses are being expanded to include increased individual activities, Red Cross First Aid courses carrying certification, and added consideration for individual health problems. Basic work of the sophomore year will be followed by checkups during the junior and senior years. Two additional instructors have been employed to take care of the enlarged enrollment in physical education. On December 8, 1942, there was one qualified first aid instructor among the faculty; shortly after there were eight qualified first aid instructors. At the close of the last semester, twelve advanced and forty-four standard certificates had been earned by the faculty in Red Cross first aid afternoon and evening classes taught at the high school by faculty members. Likewise, sixty girls and several boys completed courses for standard certificates in classes taught at the school after hours by teachers on the staff. In addition to the above, approximately forty girls completed the course in Home Nursing. The instructor in this course was furnished us by the Red Cross.—C. A. Carson, Principal.

25. All freshmen of the Community High School of Pekin, Illinois are given First Aid instruction leading to the Junior Red Cross first aid certificate. Last year the entire student body was given this same instruction. The school is also the headquarters for the Home Nursing Training which is given in the community.—A. G. Haussler, Principal.

26. The entire student body of the Pittsfield, Illinois, Community High School was given T. B. Tests, and X-Rays where recommended, eye tests, and smallpox tests. It was recommended to the pupils that they do everything possible to further safeguard and protect their health. An air-raid warning system was established and discussed. Practices were held. The high-school music department placed especial emphasis in group singing in assemblies, class plays, and other public presentations as a morale builder.—W. E. Koontz, Principal.

27. This year has seen in the Worthington, Minnesota, High School an enlargement of the health and physical education program. The program has been amended to include the teaching of physiology and hygiene in addition to the regular physical education classes. More and more, emphasis is placed upon what good health means and how to obtain it.—F. J. Indall, Principal.

28. In the Alma High School the program has been adjusted to include all girls and boys in the school who are physically able to participate in some form of physical activity. The periods have been increased from two days per week to three days for girls and four days for boys. One of these periods is spent in the classroom in the study of health needs and habits, and in gaining a knowledge of the structure and functions of the body. Physical examinations are also included in this period. Preliminary first-aid training has been given

all groups. Some of the teachers have become certificated first-aid instructors. Other periods are used entirely for activity. The boys' classes have become periods for general conditioning. There is less free-play activity, although the major sports still have an important part in the program. All activities are more vigorous and include more pupils in each event. Seasonal sports form an important part of the girls' program. However, games and sports which may be used out-of-doors are being stressed. Short, brisk, cross-country hikes are now included in the activities. Exercises, which allow individual development and flexibility, play an equally important part. A course in rhythms has been included because of its value in the development of grace, poise, and balance. Relaxation through rhythmic activity, too, for those who wish more activity, a girl's tumbling club has been organized. Intra-mural athletics for girls and intra-mural and inter-scholastic competition for boys make a definite contribution toward general fitness.

Although it is too early to notice any great change in the muscular development, the pupils are becoming more and more health conscious. More are visiting the physical education instructors and school nurse for private interviews. There are fewer colds and other communicable diseases among the pupils because of preventions and early care. If the future shows as much apparent gain, the school is confident that its efforts are tending toward a definite contribution to the welfare of youth.—Beatrice S. Kren.

29. Physical education has always been a leader in student activities at the high school of Lexington, North Carolina. The program of the school has been enlarged to give all pupils an opportunity to take part. Every boy and girl in the school is given a physical examination to determine what type of exercise each may need. This examination serves as a benefit in several ways. In the first place it notes defects among the boys that might be corrected before they are of draft age, and it gives the faculty an opportunity to know the health and condition of the student body as a whole. Boxing and wrestling are being emphasized for the first time. These sports are optional to the pupil but a large group is on hand each day for practice sessions. There is no inter-scholastic boxing. Intra-mural basketball is gaining interest; gym classes, including courses in folk and modern dancing for both boys and girls, have taken their places in regular supervised programs. Inter-scholastic sports, in football, basketball, baseball, tennis, and golf, are expected to draw even more aspirants for a workout session.—James S. Germ, Principal.

30. Emphasis is placed on the importance of mathematics and science in the Simon Gratz High School in Philadelphia. In the gymnasiums a program motivated by war needs has been developed. The program includes tumbling, climbing ropes, climbing over obstacles, and vaulting. It has resulted in great interest among the boys. Plans are now under way to extend this program of health and physical efficiency.—E. C. Werner, Principal.

VII. PROTECTING PUPILS AND PROPERTY AGAINST ATTACK

FRANCES M. MILLS, TEACHER AND PAUL T. WOHLSEN, PRINCIPAL

Central High School, Valley Stream, N. Y.

In developing our defense organizations in our school, we have found a closer unity arising among pupils and teachers and the rest of the community. Heretofore, most of these three groups have recognized their common purpose but not every individual in the groups has. Like three circles of equal area that are not placed directly on top of one another, there have been little scallops left outside by each group. There have been a few pupils who could not feel anything in common with their elders; there have been teachers who, because of some diffidence, could not find a place in the life of the community where they felt that they could fit; there have been adults in the village who had no children in school and developed no realization of the all-inclusive social purposes of the school. The defense effort has drawn these groups more closely together so the scallops are thinner than the new moon, for all three groups are drawn into work that they do together; work that they know they cannot do very well separately.

But this is not all! In the work the pupils are doing, they are learning skills that will make them better workers in the field of business or in the home that will be theirs in time to come. They are stressing more emphatically the building of strong bodies capable of withstanding both physical and mental wear and tear. They are learning to hear bird songs in the quiet between planes during the spotter's three-hour stint. In these and other ways, we believe we are making better citizens for the future than we ever did in the past. For all these things we can give thanks in the same breath with which we lament the destruction by the guns.

ORGANIZATIONS IN THE SCHOOL

In our program, the organization which includes the largest group of pupils is the Junior Red Cross Disaster Relief Corps acting under the leadership of the school nurse and one of the art teachers with the assistance of other faculty volunteers. The general aims are those laid down by the American Red Cross but the plan of organization we believe to be our own with its division into nine units, each allotted certain tasks and led by a different member of the faculty.

Of these units the one that is probably most immediately appreciated by the community as a whole is the recreation unit. The members go to designated centers at set hours to take charge of little children whose mothers are busy in first-aid classes. The girls have received some training in the way to tell stories, lead children's games and singing and such. In time of disaster, these girls intend to add to their duties of child care by helping with the serving of tea and coffee to medical workers and victims in first-aid stations.

The office unit allows pupils to put their business training to work. In this group filing, typing, taking messages, and doing other parts of office routine figure. Those not enrolled in business classes at school are given instruction in office procedure, telephone etiquette, and related subjects so that they may step into any place where emergency creates a need for that sort of service. To date they have mimeographed 3000 blanks for the Nassau County Red Cross and over a score of twenty-page booklets outlining food quantities for mass feeding to help the regular Canteen Corps. Members of the Canteen vouch for the excellence of the latter job!

Another unit of peculiar interest is the one which turns its training in lettering and the elements of design to the making of any signs and posters needed for defense undertakings from "ads" for the Victory Dance arranged by the student body as a whole to a regular poster drive to educate the public to the need for buying war-savings stamps and bonds, obeying air-raid instructions and getting the most nutritional value for its food dollars. .

It would require some time and space to outline each unit as it deserves, so it must suffice to say that they included in addition to those already mentioned: one for conservation which has done a good job collecting used paper; one for first aid which requires members to complete the standard Red Cross course in first aid; one which knits and sews for the army and the navy and for the families of both; one for stretcher bearers where all the "big fellows" are recruited; and finally, one that will supply messengers everywhere they are needed except in the air-raid warden's post. These are covered by a separate group composed of Boy Scouts under the leadership of one of the science teachers.

THE SCHOOL'S OBSERVATION POST

In getting material for this article, the writer had a most interesting expedition to the school roof where the airplane spotters walk their beat, rain or shine, hot or cold. It's not a place of easy *entree*; one must be suitably identified or escorted. Not long ago a man in uniform appeared and asked to be shown up to the roof, but since he lacked papers of identification, he was refused. Subsequent investigation proved him to be an imposter wearing a uniform which did not belong to him. We were not informed of what else was learned about him.

Once up the dark narrow stairway leading to the central tower of the building, we found a little room about ten feet square. It is equipped with a telephone, heating arrangements, and the requisites for making coffee. The walls contain charts of airplane silhouettes and other items of local color the most important of which is a map of the surrounding territory upon which boundaries have been drawn showing the reporting spheres of our neighbors and that of our own post. This is to prevent an untimely duplication of reports to the Army Information Center in New York City. Upon

being asked how one could tell whether a plane at a distance was in our area or someone else's the sophomore boy on duty up there replied with politely cloaked condescension that there are "many parts of a plane that can be seen two miles distant that you can't see four miles distant!"

At all times during the day, the observation post is manned by one teacher and several boys working in three-hour shifts (The American Legion takes over at night). There is a proposal at present to solicit the aid of the girls, too, while women of the faculty have been serving since the beginning with the boys. The intrepidity of the senior member of our faculty in fulfilling her regular duties in all weather has been an inspiration, if not sometimes a rebuke, to the rest of us. For the spotters do not stay comfortably by their fire! One, at least, must always be outside patrolling the roof. This was done so conscientiously that the roof began to show signs of wear so that now we have a board walk with handrails up there. Here boys and teachers walk up and down until a plane appears. As soon as it is near enough to identify, an immediate report goes to the Army Information Center where another plug is inserted in the filter board map which shows the course of all planes flying in the district of the first interceptor command.

The boys have taken their responsibility with a seriousness that arises, no doubt, from the consciousness in each that he may be one of those to report the presence of the first enemy planes over the Atlantic coast. They can hear with a keenness often unsuspected in the classroom and they can tell a P-37 from a B-19 without a second glance. In discussing this, the faculty advisor said, "Why, Bob Nelson will say, 'Now watch. In about one minute two planes will go up; one will go east and one west. P-37's.' I've seen him do that many a time and, when I asked him how he knew, he replied, 'Oh, it's a submarine patrol. I've watched 'em do that every morning at this time for three weeks!'" The development of such powers of accurate observation will never do any harm.

OTHER CONTRIBUTIONS

During school hours in the homerooms, pupils have undertaken the sale of defense stamps and bonds, at present leading all such sales in Nassau County with a total of over \$3,000. Recently, \$1,105 were raised in the same fashion by a sale of tickets to a concert given by the school band for the benefit of the USO. At a dollar a piece tickets have been sold by our own school exclusive of sales by the other schools in the community.

Our girls' physical education directors have introduced special work among the pupils for greater physical fitness, and the program has been extended to include classes open to women of the village on two evenings a week. The director reports that the ladies have lost unwanted poundage and gained, in many cases, new friends. This last is especially important in a place so close to the hurry and impersonality of New York City. Many of

our people have come from the "big town" recently and have found it a little hard to find their niches. If the physical fitness class has helped in this in addition to restoring better health through reconditioning exercises presented, then the program has earned its way on two strong counts.

Coming more particularly to the work of the faculty, we may say that every member has done his bit—if by no more than passing a standard Red Cross course in first aid. In addition, as has been suggested, many are guiding the pupils' activities. Others are in other local defense units. Four are members of the Canteen Corps, one unit of which was trained by one of our domestic-science teachers, and one is a member of the Red Cross Motor Corps. Four are on the staff of the Nassau County ARP as air-raid-warden instructors. These four have trained all of the wardens in Valley Stream in a series of three courses giving lectures and review discussions on organization, special duties, incendiary bombs, high explosive bombs, and shelters. The school nurse has used very nearly every available minute of time off duty, training pupils and teachers of our own school in first aid and traveling hither and yon to give similar instruction to other schools in Nassau County as well as here in Valley Stream.

All of this has been an excessive drain on teacher energy but it is our contribution to our country and we give it willingly as we know that teachers in other parts of the country are doing it. It is our pride that in spite of this drain, we have not cut down on our sponsorship of extracurriculum activities for the pupils.



The schools of the nation are, without a doubt, taking the matter of protecting their children and the school property in all seriousness. Certainly, from all reports that have been received, this part of the civilian population is well protected. The school staff is sharing nobly in its part of the work of the local Defense Council. The reports that have been submitted to the Association do indicate, however, that many more air-raid drills are being held, and probably more precautions being taken in the areas along the coast of our continent than within the interior. Some of the various types of protective activities being promoted by the schools include air-raid drills, look-out towers where "plane spotters" are stationed, marking pupils for identification purpose, keeping parents informed of the whereabouts of their children, and providing entertainment for pupils while in air-raid shelters. The following reports are indicative of the many precaution measures being taken by the schools and of the way in which the schools are attempting to have certain procedures become habitual with the pupils:

EXAMPLES OF ACTIVITIES

1. Three different plans have been developed and practiced by the Keith Junior High School of Altoona, Pennsylvania for air-raid drills. One provides

for complete evacuation of the building. Another for partial evacuation—this to be used if there is time enough. The third plan provides for evacuating pupils to safe areas in the building for entertainment during the time of the drill.—C. E. Whipple, Principal.

2. The East Senior High School in Rockford, Illinois has taken every precaution for the protection of its pupils and its property. Air-raid defenses have been established through drills and possession of fire-fighting supplies, special pupil and employee assignments, fire-extinguisher stations, and an all-school program of instruction in air-raid defense.—H. C. Muth, Principal.

3. The high school of Chandler, Oklahoma gives special attention to air-raid drills and training pupils in the precautions necessary in the event of an air raid.—J. O. Bumpas.

4. Three special groups of pupils were organized into an air-raid defense group in the Arthur Hill High School of Saginaw, Michigan. These groups are: (a) each of the 250 classes has its own air-raid captain; (b) fifty volunteer air-raid wardens were secured and trained; (c) fifty first-aid workers were assigned and equipped. Air-raid drills are held during class periods, assemblies, pep meetings, lunch periods, and while classes are passing. All special squads operate according to instructions. The silence in the halls during these drills is a startling revelation to all.—I. M. Brock, Principal.

5. In the West Senior High School of Columbus, Ohio, frequent air-raid drills are being conducted. Each pupil has a specific spot in an assigned shelter area. Despite the fact that military discipline is maintained, the pupils are exceedingly co-operative.—H. H. Rieghley, Principal.

6. The Simon Gratz High School of Philadelphia, Pennsylvania has an enrollment of approximately 3600 pupils. The building is a modern fire-proof structure, four stories high. The entire school was inspected very carefully and safety areas, conforming to the requirements, were selected. These were established in the halls on the first, second, and third floors. Because of crowding, a safety area was also established in the basement. Floor plans of the three floors were drawn and blueprints made, showing the safety areas, first-aid stations, infirmaries, toilet facilities, drinking fountains, and other important locations. Each safety area was provided with these facilities.

The air-raid drills were organized using the locker rooms as safety stations, following the idea of "boat stations" as used on shipboard. This meant that regardless of different rosters and changing conditions for every period of the week, each pupil would always report to the same place of safety for an air raid. To prevent the crowding and confusion caused by having the entire school move at one time, two signals were agreed upon whereby the school was divided into two equal parts. The pupils in rooms in the basement and on the first and third floors were instructed to move on the first signal, and those in rooms on the second, fourth and fifth floors to move on the second signal.

The faculty was instructed and assigned to numerous special duties and places. The special assistants to the principal and heads of the various departments were assigned special supervisory duties over the several safety areas. These supervisors were provided with special police whistles to be used in emergencies, and as raid signals for the entire school in the event of the failure of the electric bell system to function. Six members of the faculty were assigned, one to each safety area, to be in charge of the activities program including singing and games. Six first-aid stations were established, with the necessary assistants and equipment. Drills have been held regularly from time to time with very gratifying results. Classes were also organized for volunteers among the faculty to train and qualify them for appointment as air-raid wardens. Others in the faculty trained for first-aid certificates, and some prepared to qualify as instructors in these two important fields. Pupils were taught first aid in all hygiene classes and volunteers among them were trained as stretcher bearers, auxiliary police, spotters, couriers, and traffic aides.—E. C. Werner, Principal.

7. Because the Union High School in Escondido, California is inland, 35 miles from the San Diego area, it was considered advisable to set up an emergency relief program in case of disaster or the necessity for accommodating evacuees. The homemaking teacher added an extra hour to her already full schedule to become a member of the local Defense Council and chairman of the Community Canteen. In that capacity the teacher conducted certified Red Cross foods, nutrition, and canteen courses for local women. As a result, the Escondido community is prepared for contingencies that may arise in providing for the feeding and care of a large number of persons in temporary need.—M. W. Perry, Principal.

8. The high school at Okmulgee, Oklahoma is organized for air raid and fire drills. The school blocks are organized with block mothers in charge for emergency. The PTA has been organized to carry on a program that will help to prepare the homes and families for war conditions as rapidly as possible.—W. M. Chambers, Superintendent.

9. The Gloucester High School of Massachusetts has taken every possible air-raid precaution. By using the school's regular class-passing signal which becomes intermittent rather than ceasing as the usual procedure, pupils are notified of air-raid drills. Regular shelters have been provided on the first and second floors of the building as protection. After the drill, pupils are called to class by a trumpeter of the ROTC unit.—L. O. Johnson, Principal.

10. The University of Wisconsin High School appointed a committee of staff members to draw up some suggestions that might be usable as materials and techniques for organizing emergency activities within the schools of the state as well as within the University High School. Among these techniques suggested was that of conducting air-raid drills. Specific suggestions were

drawn up so that they would relate more particularly to schools within the state. Realizing that there was not as great a likelihood of schools in this state being subject to air raids, they, however, felt that all necessary precautions should be taken and definite procedures developed and practiced so that in the event a real raid should happen schools and pupils would have become habituated in doing the proper thing.—John Goldgruber, Chairman.

11. The Tilton Northfield High School in Tilton, New Hampshire not only drew up definite rules and regulations concerning air-raid drills but also listed various precautions as another means for giving more protection to school pupils. Among these precautions were definite instructions and practices in the formation of squads. A troop was made up of four squads which was generally in the charge of a teacher. Troop leaders and assistants were given a definite course of training for their work. Likewise each squad was given definite training as to its specific duties. All this information was put into a small handbook which formed the basis for training. Since many of the pupils in this school are transported, specific regulations were drawn up which affected the operation of the school bus. Every pupil was finger printed for identification purposes.—D. P. Matteen, Principal.

12. Special emphasis is given by the Hamilton Township High School at Trenton, New Jersey to the protection of its pupils. Pupils and teachers are regularly drilled in their responsibilities during an air raid. Student patrols have been established and receive regular training. First-aid instruction is given to all pupils. Advanced instruction has been given to 30 pupils. Instruction films such as "Fighting the Incendiary" will be shown from time to time in the assembly.—A. H. Flury, Principal.

13. The school district of the Lincoln High School of Des Moines, Iowa has been divided into twenty-three areas in order to expedite defense projects. Regardless of home-room affiliations or pupils living in a designated area of the unit, each area, supervised by two teachers, has elected two lieutenants to direct subdivision activities within each area. As an example of some of their work or anticipated work the following is cited: When it became necessary to make a survey relative to the location of doctors, nurses, and others trained in first aid, this was accomplished quickly.—A. C. Hutchens, Principal.

14. In the event of air raids, the Taylor Allderdice High School of Pittsburgh, Pennsylvania has worked out, in connection with the city schools, three systems of evacuation of pupils:—complete evacuation, partial evacuation (dismissing those pupils who live within fifteen minutes walking distance of the school and holding all others in places of safety), and no evacuation which involves placing all pupils in the school in the safest parts of the building. Drills in all of these types have been conducted so that it is felt that the pupils are prepared in the event of any contingency. In this connection, a relay system has been perfected with the public and parochial schools in the

district by which a message can be relayed within four minutes to every school. This has been practiced several times with satisfactory results.—R. G. Deevers, Principal.

15. After provisions were made to cope with direct enemy attacks, attention was focused on organizing the high school at Hammond, Indiana so that distractions would be reduced to the minimum and war-time enthusiasm utilized as a motivating force in regular classroom work. Provisions were also made to build that secret weapon called morale and to assist the community in meeting special demands created by the emergency. As far as possible existing organization and established school activity have been adjusted to meet the war-time needs and demands.—C. T. Coleman, Social Science Department.

16. First-aid instruction is offered in the high school at Athol, Massachusetts. Likewise information about the various kinds of bombs, especially the methods of extinguishing fires from incendiary bombs, is given to the pupils. Air-raid wardens and trained messengers among the student body assist the teacher in charge of the air-raid drills. A very definite check on every pupil is made when everyone is supposed to have reached his designated place of shelter.—Donald Dike, Principal.

17. Air-raid drills are conducted periodically at the Roosevelt Junior High School in Erie, Pennsylvania. Air-raid wardens, fire guards, and first-aid teams have been designated and trained. First-aid facilities have been purchased and two first-aid rooms have been equipped. Special fire-fighting precautions and fire-fighting equipment have been installed.—H. C. Gillespie, Principal.

18. Defense classes were conducted by every member of the high school faculty at Maumee, Ohio. Classes in auxiliary police, fire watchers, and air-raid wardens, ranging in size from 18 to 65 adults from the immediate locality, met once each week for ten weeks. Comment reveals the regard that people have for teachers who have given their time and effort to teach these classes. The schools have become the meeting place for the townspeople and a more wholesome relationship has been established. It is evident that the morale of the participating teachers was improved through this contribution of their efforts to the program.—H. H. Palmer, Principal.

19. A committee of five men teachers, four of whom had served in the first world war, made a thorough study of the Lincoln High School building in Cleveland, Ohio. Working jointly with the custodian, they drew up a plan for the protection of pupils and teachers in case of an air raid. Drinking water and toilet facilities are readily available in case pupils are forced to stay inside the building for any length of time. Every classroom teacher and pupil in the building know exactly where they are to go when the danger signal is sounded. After three talks over the school's public address system by the principal, who particularly stressed the need for morale and discipline, air-

raid drills were held. Knowing that at times the school would have the opportunity of sending the pupils home before the bombing occurs, an outside drill was held. Every pupil was instructed to go straight home and not gather in groups on the streets. Teachers were stationed at all cross streets where traffic was heaviest to see that no accidents occurred. Others patrolled the streets in cars for several blocks. Instruction of pupils and their parents in intelligent safety measures is also given. Two pictures, "The Bombing of London," and the Ohio Bell Telephone Company's picture, "What to Do in an Air Raid," have been shown to the pupils and the faculty. At an "open house" the pictures were again shown. A member of the police department gave a short talk about safety, and one of the faculty members told the parents what had been done for the safety of their children. Articles on safety have been published in the school paper from time to time.—C. H. Lake, Superintendent.

20. Courses in first aid were given at the Central High School of Chattanooga, Tennessee for both pupils and faculty members who volunteered for this service in the civilian defense. During air-raid drills it was inspiring to observe the sense of responsibility and efficiency with which these fine young men and young women secured their supplies and arrived at their respective posts of duty.—S. E. Nelson, Principal.

21. Thirty boys have enrolled in the messenger service in the high school at Marion, Virginia. Training has already begun under an instructor with special qualifications. These modern "Minute Men" will serve in any emergency—particularly in case of disrupted communication lines, and fires caused by incendiary bombs.—W. W. Wilkerson, Principal.

22. The pupils of the high school in Downingtown, Pennsylvania have been carefully organized as a means of protecting them against possible air raids. Drills are held regularly. Pupils are assigned to air-raid defense positions during the drills. At the same time the school is co-operating with the local Defense Council. Boys have been assigned and trained as messengers and runners. At the same time the teachers are assisting the local Defense Council as air-raid wardens and first-aid and other instructors. Most of the faculty members have completed the standard Red Cross first-aid course.—W. N. Butler, Principal.

23. At the high school of New Canaan, Connecticut the entire school system has been organized for air-raid defense. Pupils have been assigned to perform regular duties. Drills are held regularly. The school also is a part of the emergency housing program for shelter in case of disaster. Pupils have been trained to assist in this work. The pupils act as canteen workers, as guides and directors as well as assist in salvage drives and drives for the sale of stamps and bonds.—E. F. Waldron, Superintendent.

24. One of the most recent developments in the Prescott (Arizona) High School has been the organization of a corps of teachers and pupils for the pur-

pose of converting the high school into an emergency housing center in the event of evacuation of refugees from the Pacific coast. Although it is hoped that such an event will never materialize, the plans for such a project have been worked out to the most minute detail. Another worth-while and very necessary defense unit is the de-contamination squad, headed by the science teacher and several others, and composed principally of some of the older school boys. Theirs would be an especially important job if evacuation were to become an actuality.—H. T. Cox, Principal.

VIII. PROTECTING THE IDEALS OF DEMOCRACY AGAINST WAR HAZARDS

HERBERT D. GWINN, PRINCIPAL

Unified High School, Big Pine, California

Our school may best be described as a small metropolitan plant in a rural area. It is the best built and largest building in this little community of four hundred and eighty-six persons. Big Pine, nestling under the protective heights of the high Sierras, is located in the Owens Valley. Mining, stock raising, and agriculture are the chief occupations. Other sources of income are: the Department of Water and Power of the City of Los Angeles, and the State and the County Highway Districts. The elementary school of 130 pupils is housed on the lower floor of the building, while the high school of 40 pupils occupies the upper story. In a situation of this kind any war-time program, from the administrative standpoint, calls for close co-ordination between the two schools.

During the interim between September 1, 1939 and December 7, 1941, the pupils discussed the war in their social science classes; saw a few boys depart for training camps, but on the whole, life here as in other parts of the United States, went on pretty much the same. No one became greatly excited about the conflict. The general idea seemed to be that if the war lasted long enough, we would eventually be in it, but until that happened there did not seem to be any need to depart from the "business as usual" philosophy. Then came Pearl Harbor! When the school day ended Friday, December 5th, the pupils departed joyously in the anticipation of a week-end holiday. When they returned Monday, December 8th, there was but one idea in the minds of all. Every individual was saying, "Let's do something!" They did. Right after hearing the President, *via* radio, ask Congress for a declaration of a state of war against the Empire of Japan, the pupils voted unanimously to use student-body funds to purchase a defense bond. When it was discovered later, that the smaller denomination bond could not be purchased by organizations, the pupils, with one stroke cut through this minor bit of red tape and made an outright gift of the sum to the United States Treasury. Their fighting spirit was aroused. It now remained for the ad-

ministration and faculty to direct this sudden energy in those channels which would best serve the war effort.

No attempt was made to formulate or set up a spur-of-the-moment program. It was thought best to let the pupils participate in the usual civilian war activities, wherever the school could best function. In general, the school did the usual things at first. A program of regular buying of war stamps and bonds was initiated. An efficient air-raid drill was established in which secondary-school boys were used as various types of wardens under faculty leadership. The girls assisted with the care of the younger children in the elementary school during such drills. Participation in the various salvage campaigns was encouraged. Entertainments were given to raise money for war funds. The pupils in lieu of inter-scholastic activities, participated in community recreation programs to a greater extent.

Specific instances in which our program developed to co-operate with the war effort and at the same time developed a conscienciousness on the part of the pupils of protecting the ideals of democracy against war hazards can best be illustrated by discussing some of the problems and projects initiated in the several departments.

THE SHOPS KEEP THEM INTERESTED

Because of a need to purchase other materials, it was decided that an economy in hardwood buying could be effected by using two good native hardwoods. Accordingly, under the direction of the shop teacher, selected groups of boys in that department, went out and felled locust and black walnut trees. The timber has been cleaned, cut, and stored for seasoning.

Scrap metal was collected for use in the machine shop course, thus making it unnecessary to purchase great quantities of new stock as in the past. Because the shop was in the midst of expanding, new equipment was being added during the spring semester. Under the guidance of the shop instructor, the installation and wiring for these machines was done by the pupils. In order to complete this work before the close of school, the instructor and boys spent several evenings doing it. The repairing and maintenance of equipment has received greater emphasis than before. In connection with air-raid precautions and fire protection, the shop boys collected and filled 100 five-quart oil cans with sand and carried them to the roof of the schoolhouse. During summer, many of the boys worked on farms, in stores, and on country road crews, doing their share to relieve the labor shortage.

In the homemaking department greater attention has been given to the fine old art of patching, mending, and remaking clothes. After all, the materials in the clothing we now have, if given careful treatment will no doubt outlast and be superior to any *ersatz* material we will get for awhile.

In the field of cooking, interest has centered on preparing cheaper meals. Naturally the health angle has been carefully considered so that while the

food used in preparing these meals costs less, they are not devoid of the necessary vitamins. Preparing healthful meals is the most important contribution the housewife can make to the civilian war effort. The homemaking department also filled kits for the local boys who were leaving for military camps.

The class in general science, this year, happened to include pupils who profited best whenever practical applications of general science could be used. As a project, correlated with the subject of electricity, the class overhauled the school bell system. In connection with air-raid precautions, the class studied incendiary bombs and methods of extinguishing them. This led to a study of the fire protection problem in general, particularly of the fire extinguishers in the school building. Accordingly the task of refilling and recharging the soda-acid type of extinguisher was turned over to the class.

Many of the science pupils enrolled in defense first-aid classes which were given to the public in the evenings. Fourteen of these pupils received Red Cross first-aid certificates. Part of them are organized in school first-aid units while the others are serving on the Community Red Cross Disaster Committee. Credit was given for the successful completion of the course.

Several mass production tasks connected with defense work fell upon the commercial department. The preparation and mimeographing of registration forms for such activities constituted the bulk of the work. Typists were also furnished wherever needed.

PHYSICAL EDUCATION KEEPS THEM FIT

Since the rubber shortage has knocked inter-scholastic athletics into a "cocked hat" for the duration, the administrators may yet see their dream of an A-1 intramural program become a reality. Since our institution possesses one bus, tire regulations affected us immediately. Inter-scholastic competition had to cease, because of distances involved and the lack of adequate service from public carriers. We are on our way toward developing a genuine intramural program from the elementary school up through the secondary level.

One of the unusual features of the physical education program was the initiation, during the latter part of the spring semester, of a course in military marksmanship. Instruction was given by a qualified faculty member. The need for this arose for several reasons: *first*, many of the boys use firearms here because it is ideal hunting country and knowledge of the correct use of firearms and their safety features is necessary; *second*, some of the boys will soon be in the armed forces where marksmanship is important.

CONTINUOUS ADJUSTMENTS MEET NEW SITUATIONS

Many changes and adjustments have been planned for the present school year. The requests from the United States Office of Education that courses in Aeronautics be established in the American schools for the purpose of air-conditioning American youth, marks the first concrete instance in which the

educational facilities of America are being asked to make a genuine contribution not only to the war effort, but to the air-minded era of peace.

Our course will be entitled *The Science of Aviation*. It will be an upper division course taught along orientation lines and open to both boys and girls. Interest in aviation in this locality has grown considerably since last year. The valley is now one of the centers for Civilian Pilot Training. With the possibility of the establishment of such a program at the local airport and the school facilities being used in the evening for aeronautical classes, we are looking forward to an aviation "boom" in our school. It certainly will supply the pupils in the science of aviation class with plenty of opportunities for first-hand knowledge and observation on actual flying. The opportunities for the co-ordination of the subject of aviation with other departments are unlimited. The shop department will give attention to airplane service and maintenance. In the commercial geography course interest will center around maps, particularly the polar projection, suitable for use in the coming air age; while the social science will give attention to the subject of geopolitics. There is no doubt that there will be increased emphasis upon aviation and its problems.

Our shop has been expanded along the lines of long-term planning. While much of our equipment can and will contribute to the war effort, it will be of invaluable use to us when peace returns. The reconditioning and repairing of home appliances, tools, and farm equipment will receive more emphasis this coming year. Formerly, worn out appliances could be replaced more cheaply than repaired. With the appliance industries converted to war work, it is either a case of repair what you have or do without. With this in mind, a small welding unit has been added to the shop. The opportunities for the repair of farm tools and machinery with this are unlimited.

In the field of physical education, we plan to expand our intramural program. We expect to solve the football problem by dividing the high school and seventh and eighth grade boys into about four six-man teams which will give us a nice little league of our own. In addition to team sports, more attention will be given to boxing, wrestling, tumbling, and other gymnastics with a view of "toughening up" the pupils for either labor or military service.

In the final analysis, our school is making every effort to adapt and adjust its program to present-day needs. It aims to give to boys and girls that type of training which will in a practical way make them better able to do the work they plan. At this time the school is concerned about the everyday reactions of its pupils. Every effort is made to protect the ideals of democracy against war hazards. By keeping them occupied with a training program they feel is of value, by actual participation in the everyday activities of their community, they thus actively become aware of what democracy has for them. As a result they learn to become co-operative, eager to help whenever possible in the common cause against the Axis powers. Thus through deed

as well as word we attempt to "defend the democratic mind and spirit against the corrosive attacks of irrational fear and ignoble hate."

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There are a few schools that have reported very definite efforts on their part to place pupils on guard against some of the hazards to democracy which are aggravated by war-time conditions such as lack of tolerance toward other peoples, and opposition to the studying of the language of enemy countries, or the music, or art of the same countries. However, from the reports received it is readily discerned that most of the schools are doing their part by indirection in an effort to protect the ideals of democracy. Schools directly, and probably more indirectly, are stressing to their pupils the responsibilities, the comfort, and the enjoyment of civil liberties. Every effort is being made on the part of the schools to guard against any education for revenge. The following examples give, more or less indirectly, an idea of what the schools are doing to guard pupils against these war hazards. Not only this section, but other sections of these reports indicate what teachers are doing in this area.

EXAMPLES OF ACTIVITIES

1. The music organizations at the Royster Junior High School in Chanute, Kansas have been used for community service on a larger scale than ever before. It is their belief that the morale of the community has gained greatly as a result. One organization, the girls' glee club combined with the string orchestra, totaling one hundred and five members, gave ten public concerts last year. Their religious programs, some given in the larger churches, have taken the place of regular church services. One benefit concert for the Red Cross given by the band, the combined girls' glee club, and string orchestra raised \$125.—E. W. Grigg, Principal.

2. The high school at Wildwood, New Jersey felt, first of all, that its regular basic work should go on with as few interruptions as possible. It planned, however, to adjust courses wherever possible. In science, for example, aeronautics, the chemistry of ordnance materials, health, transportation, and the like were stressed. In social studies, the work is oriented from the present. In home economics, experimentation is done in cooking with substitutes for sugar and in sewing with used garments. Physical fitness is stressed in all classes but particularly in health and physical education. Every pupil in the school is required to take a period a week of first aid, safety, and related work. Many of the pupils joined outside agencies later and obtained further special training.—J. P. Lozo, Principal.

3. Soon after moving into the new building in 1940 the student cabinet of the Arthur Hill High School of Saginaw, Michigan proposed a special opening exercise for all assemblies. It consists of a flag display against a blue drop with white spot and concealed fan, the national anthem led by song leaders in uniform, and the Pledge of Allegiance. This opening was

thoroughly explained, memorized, and practiced for weeks in all advisories before it was finally attempted in the auditorium. This simple undertaking did something for our school morale.—I. M. Brock, Principal.

4. Readings chosen by the faculty Committee on Morale of the high school of Hammond, Indiana have been used by English teachers in their classes. These have included Bertrand Russell's *A Philosophy for You in These Times* and selected short essays by famous foreign-born Americans published in the book *I Am An American*. The weekly newspaper edited and printed by the pupils had done much in providing important home defense information and in building morale among the student body. Most of the material has been prepared by the student staff, although some articles were written by other student leaders. War-time activities of the student paper have included: comic strips printed from linoleum mats showing what pupils can do in aiding the war effort—walk to school, save waste paper, study first aid, roll bandages, and buy bonds and stamps; publicizing and interpreting stamp and bond sales, China relief, USO, and Red Cross drives; giving a defense stamp with a subscription to the paper; using mats furnished by the U.S. Treasury Department which popularize the purchase of war stamps and bonds; and operating a news bureau which collects and prepares news for the Director of Civilian Defense in the city who sends the copy on to the local newspaper—one reporter gathers news from each district and the managing editor co-ordinates their work.—C. T. Coleman, Principal.

5. In the Mother of Mercy Academy in Cincinnati, Ohio, one morning each week is set aside for the purchase of defense stamps. In accordance with local regulations, a place of shelter was designated in the case of an air raid, and general practices held. Pupils were urged to be conservative with paper in and out of school, to collect tinfoil, old paper, and scrap materials for industry. The school took part in the Community Victory Book Drive; books and pamphlets were sent to the camps. The bulletin boards carried daily reminders of the necessity of prayer and sacrifice. Outside of these activities, the regular program of the school marches on with the usual round of routine affairs.—Sister Ethelreda, Principal.

6. The George Washington High School of Indianapolis, Indiana has set up a committee of correspondence to finance and compose newsletters to Washington boys in the service. There are 900 sustaining members on this committee. This first issue included fifteen mimeographed pages prepared by contributing members. This letter has been most favorably received by the service men of this school. The committee has sponsored two convocations—one for members to hear the recordings of the radio broadcast *We Hold These Truths*, the other, to hear excerpts from the school's service men's letters and to pay tribute to three former pupils who have made the supreme sacrifice. The committee has planned to have prepared a large

map of the world with Indianapolis the center. On this, pins in the school colors will be placed for each of the boys whose location the school is able to establish. By these activities it is hoped to emphasize geography and stimulate interest in the current scene, and at the same time, guard against any war hazards. A faculty committee and a student committee work on civilian morale, defense aims, conservation, and an understanding of the causes and implications of the World War. This student committee had a plan which had grown out of activities in a history class. The plan was adopted by the Student Union for the promotion of student participation in the defense effort. After December 7, it became a *War Service Plan* known as *The Call to the Colors*. It recognizes ten fields of service as follows: health, scholarship, attendance, spiritual values, civilian morale, first aid, conservation, service, war stamps, and air-raid precautions.—W. G. Gingery, Principal.

7. As a means of better understanding between the high school of Hammond, Indiana and the community, arrangements have been made for expressions of sympathy in cases of bereavement caused by the war. Following the death of a graduate or former pupil in the war service, teachers who were intimately acquainted with the deceased call on the family and express the sympathy of the school. This provides a bond between the school and the home at a time when it is most appreciated by parents. Also, the experience of visiting homes at the time of maximum war loss brings teachers closer to the war-time realities.—C. T. Coleman, Social Science Department.

8. A "Thumbs Up Club" of girls at the Drury High School in North Adams, Massachusetts has been organized for some time. Members have been sending cigarettes and sweets to former pupils of the school, who are in the armed forces scattered over the face of the globe. About 350 packages were sent up to May 1.—D. W. Fowler, Principal.

9. After a series of faculty meetings at the high school in Maumee, Ohio, a general conclusion was reached which verified the previous belief that the way to build morale, and guard against war hysteria in the classroom, is to expect pupils to assume more responsibility regarding their school work and to realize their duties as a citizen in their school and community. As one teacher puts it, "One way of teaching responsibility is for me to be responsible myself." By so doing, pupils and teachers have become conscious of items that might have otherwise been unnoticed. For instance, rules of safety have been brought to their attention through air-raid drills strictly carried out. The location and use of fire extinguishers have become common knowledge to teachers. Boys can all the more readily see the relation between physical fitness and proper living with rest, exercise, correct posture, and wholesome food. Thus, the school hopes

to teach the ideals of democracy by deed as well as by word. Every effort is being made to increase the pupils' ability to detect propaganda, to resist the psychological effect of war, and to expose rumors of the type likely to be circulated, either treacherously by the Axis powers or innocently by our own people.—H. H. Palmer, Principal.

10. If a fair criterion of loyalty to the nation, in its hour of need, is a whole-hearted response to activities which indirectly inculcate democratic ways of thinking and acting, then the pupils of Lincoln High School of Cleveland, Ohio will rank high in devotion to American ideals and traditions. Composed of pupils with many diverse nationalities and religious faiths, and coming from homes whose standards of living are often low, the school has for many years been engaged in molding character by promoting toleration and co-operation through better understanding. Evidence of this spirit has been witnessed by their behavior since our entry into this vast world conflagration.—C. H. Lake, Superintendent.

IX. TEACHING THE ISSUES, AIMS, AND PROGRESS OF THE WAR AND THE PEACE

HYMEN ALPERN, PRINCIPAL
Evander Childs High School, New York City

When the treacherous blow fell at Pearl Harbor, its reverberations were heard in our schools as clearly as elsewhere in our nation. Spontaneously, young and old alike sought ways to come to the aid of our stricken country. At Evander, immediate steps were taken to enlist this spirit of help while it was still fresh and willing and at the same time follow the issues, aims, and progress of the war and peace.

The first step was the voluntary organization of the faculty into thirty-two committees. There were committees on first aid, Red Cross sewing, knitting, blood donation, bandage rolling, Girls' AWVS, and salvage and conservation. Some committees are more active than others because of the functions to be performed. The committee on Defense Stamps and Bonds has been continuously engaged in the sale of stamps and bonds to pupils and faculty. More than \$15,000. in stamps and bonds have already been sold in the school. The Salvage and Conservation Corps has sold eight tons of waste paper for a total of seventy dollars. This money is used for contributions to relief organizations and the Student Aid Fund.

PUPILS PARTICIPATE ENTHUSIASTICALLY

The extent of pupil participation is difficult to estimate. Pupil membership is enlisted even on faculty committees. The Junior Unit of the

American Women's Voluntary Service (AWVS) was headed by a faculty member who was connected with the parent organization. The AWVS enrolled 260 girls in the school. Many of these girls assisted in the sugar and gasoline rationing. Many others are taking prescribed courses in nutrition and similar activities offered by the national organization.

The Red Cross First-Aid committee has established five first-aid stations in our school building, housing 5,000 pupils and 250 faculty members. These stations are manned and equipped to serve in an emergency. First aid courses have been offered to pupils and teachers. About one hundred members of the faculty have received standard or advanced Red Cross certificates. Fully half this number have received instructor's certificates permitting them to teach first aid. In the current term pupils attended three junior courses, two standard courses, and one advanced first-aid course. This work is to be continued in the fall. It is proposed to add a course in accident prevention. This is to be open to teachers and pupils.

The factor of morale has received much attention here. The wide ramifications of pupils and faculty activity in a democratic way have constituted in themselves an element of reassurance and confidence in the school as a whole. To keep up the tone of the school, musical programs in the assemblies have helped a great deal. At one of the assemblies, the Ballad for Americans was performed. At others, musical programs of Western and Southern songs were offered. Patriotic songs, both old and new, have served to keep up drooping spirits.

It is most important that knowledge and understanding of the war be widespread among pupils and faculty. For this purpose a committee on War Information was formed with a member of the social studies faculty as chairman. Numerous subcommittees were formed to carry out effectively the purposes of the committee. For example a Publicity committee has publicized in the school the names and achievements of graduates in the fighting forces. Lists of graduates in the service have been promulgated for an Honor Roll and a Service Flag. Letters from boys in the service have been collected and published in the school newspaper.

COMMITTEE FORM OF ACTION CHARACTERISTIC

Another committee on Forums and Discussions has done some interesting things. A forum discussion led by one pupil with six pupil speakers dealt with the topic, "What Are the United Nations Contributing to the War Effort?" An assembly of 1600 pupils was held spell-bound by the presentation. At the conclusion of the three minute speeches, written questions came in from the audience. More than 140 intelligent questions were submitted. Those which could not be answered because of limitations of time were later analyzed and submitted for answers and discussion in English and social studies classes.

This committee has also trained panels of speakers who may be invited by a subject teacher to discuss any of four topics in which these pupils have been trained. These topics are: The United Nations, The Home Front, The New Order vs. The Democratic Order, and Rationing. Here again questions are encouraged, and discussion may be more general than in a larger assembly. Teachers and pupils have been warm in their praise of this feature. This program of forums and discussions is to be still further extended in the future. Another aspect of the work of the committee on War Information are the suggestions to teachers about utilizing phases of war information in their subject classes. Sometimes these suggestions are made orally in faculty meetings. One faculty meeting was devoted to a discussion on "The Morale of Students in Evander." Interesting questions on what to do with luke-warm pupils, antagonistic pupils, and the meaning of morale came before the faculty.

The committee on War Information has a joint sub-committee for the social studies and English engaged in the promulgation of a program of activities for those pupils in the lower terms who are not programmed for history. These pupils do not ordinarily have an opportunity to discuss war issues or current affairs. The English classes of the third and fourth terms are studying contemporary issues through the reading of current and periodical literature.

MODIFICATIONS IN COURSES

Courses of study are being modified in keeping with the spirit of the times. The social studies classes have modified their content in order to keep up with the times. Wherever possible lessons are motivated by contemporary events. The English department has a course on American life as seen through American literature. The art department has been busily engaged in making posters for the numerous drives and activities connected with the war effort. More important than this, is the factor of maintaining morale. As the chairman of the art department put it, "Art is an indispensable force in morale maintenance and a therapeutic medium." The Spanish and history departments have co-ordinated their efforts in offering a course in Latin-American history. The librarian has built up an excellent Latin-American collection of pamphlets and other published material.

In the science subjects, the physical science department is offering a new course in "Navigation." The chief requirement for enrollment is a knowledge of trigonometry. The mathematics department is co-operative in this work. Pupils in the navigation course are being prepared for nautical and aeronautical navigation. The biology department has modified the syllabus in first term biology by including material on first aid, nutrition, and bacterial studies. Although our school is in a thickly populated metropolis, plans are being made to introduce a course in agricultural problems.



There has been no report that has indicated that secondary schools are existing as usual. Each school has indicated that adjustments are being made to meet present-day conditions. In the social science, as well as other classes pupils are kept informed of the issues, aims, and progress of the war. The reports that have been submitted indicate that it is no exaggeration to state that every pupil in the secondary school is eagerly following the progress of the war.

History, geography, and literature have taken on new life to most of these pupils. The world no longer appears to them as a flat surface but rather in its true shape, as a global surface. The inaccurate Mercator map has given way to the real spherical map. Pupils today are beginning more and more to realize that this country is inseparably bound up in world affairs, and that isolation is no longer a safe retreat. The following reports indicate to some extent the effort that every secondary school is making in this area:

EXAMPLES OF ACTIVITIES

1. The high school of Longview, Texas gives special emphasis to the teaching of the costs of this war and of wars in general. It likewise attempts to interpret to its pupils the meaning of democracy, pointing out to them the difference between the American government and that of our enemies. Likewise they attempt to teach about the war by having pupils become active participants in school activities which form part of the war effort such as collecting money for helping people in the war stricken areas of the world; buying stamps and war bonds; collecting papers, metal, and rubber; conserving food, rubber, and other critical materials; conditioning them to do war work and arousing within them a will to win the war and a desire for a well-planned peace after the war.—R. L. Speight, Principal.

2. At the high school in Keene, New Hampshire there have been discussions, lectures, and readings in current events on the war, national, and international affairs. Whenever possible the radio (in school time as well) is used. When important speeches or reports are made over the radio, classes are combined for listening. In class discussions wherever possible, parallels and contrasts are drawn between men and events and movements both in the United States and abroad. Frequent use is made of the radio to hear important speeches or news broadcasts. This has been done in class time as well as out-of-class time. A unit of work on newspapers has been introduced to notice the different ways of reporting news; *e. g.*, dispatches from Russia and Germany. Some attempt has been made to analyze the most common propaganda devices and to watch for them in the papers. In literature, an attempt has been made to interpret books and articles in the light of present-day situations.—R. E. Claffin, Principal.

3. In the high school of Hobbs, New Mexico the speech class meets one hour each Tuesday and Thursday for radio talks on war-time subjects which the pupils themselves prepare. This is given over the public address system on a local commercial station.—T. C. Bird, Principal.

4. The library staff of the Central High School, Chattanooga, Tennessee expended much time and effort in collecting pamphlets, periodicals, and literature needed for research and for the purpose of aiding the pupils and the faculty in keeping abreast of the times. The history department through definite assignments and lively discussions follows the progress of the war making comparison with other wars, thus giving background for a better understanding of the national and the international situation.

The social science department's contribution to the war-time program is to teach first such fundamental documents of democracy as the Declaration of Independence, the Magna Charta, the Bill of Rights, and the Petition of Rights. International understanding is promoted by a study of the various races engaged in the present world war. The pupils learned to appreciate the distinct contributions of these races to world culture and to know their part in the conflict. Through this study the pupils became conscious of the need for world understanding and co-operation. A special study was made of the war both at home and abroad from the standpoint of the cost, of the number of soldiers, and where they are stationed. "What This War Means to Me" based on articles in the *Junior Review* was made a basis for discussion. As an outcome of the discussion, each pupil was led to see his opportunity to help win the war by taking first-aid courses, purchasing stamps and bonds and by collecting paper, rubber, and aluminum. Based on pamphlets, booklets, and books that had been read by members of the class, much time was devoted to a discussion of the topic, "Preparing for a World Peace."

The English department through the interpretation of literature seeks to give a better social understanding and a deeper feeling of patriotism. The chemistry department motivates its study of explosives and other chemicals by means of their use during the war period. The art department through its handicrafts—weaving, pottery, metal work, sculpture, and painting—stresses work that soldiers might use most advantageously during a period of convalescence. The military department emphasizes only such training as would be helpful in the war effort.—S. E. Nelson, Principal.

5. All pupils in the high school at Marion, Virginia through their classes in language arts and social studies have completed a unit on "What the War Means to Us." The librarian collected recently available materials and government pamphlets. This material covered rather fully the outline furnished by the U. S. Office of Education.—W. W. Wilkerson, Principal.

6. The home-room periods of the Wildwood, New Jersey, High School were turned over to the war effort. For six months, programs were provided to

stimulate intelligent understanding of and participation in war activities. A large variety of appropriate films were shown to the pupils, capable speakers were brought in, demonstrations of various kinds were given, and the activities of the local Defense Council were explained. Because Wildwood is a seaside town, these last activities were of extreme importance. Special attention was paid to evacuation of the town, to blackouts and dimouts, and to sea disasters. Many of these things may seem to be selfish ones but they are all a part of making Wildwood self-sustaining in defense and therefore not a burden or liability to the country as a whole.—J. P. Lozo, Principal.

7. In order to follow suggestions made by the United States Commissioner of Education, the principal of the Jackson High School of Charleston, West Virginia met with the heads of the various departments to discuss how pupils might best be made aware of the issues and the progress of the war. It was felt that not only would pupils themselves be benefited, but through them the school might reach adults who were by no means wholly familiar even with strategic and geographical realities. It was decided that the social studies department should work out a unit on "The World at War" and that the other departments of the school should then make out units which would co-ordinate their work with this project. The various units would then be taught simultaneously for a period of from two to six weeks.

The unit for social studies was divided into six major topics: Where are we now? We look back; What "We" and "They" stand for; What are we doing now? Where do we go from here? and What can secondary-school pupils do to help our war program? In topic one, the major stress is on world geography and the progress of the war to date. Pupil activities include the making of maps, especially those showing strategic distances, reports on leading places and personalities, reports on the economic importance of the places concerned, and reports on military and naval weapons and strategy. Topic two stresses the causes of the war, with a survey of Axis aggression to date. In topic three, an effort is made to contrast Axis and democratic beliefs and policies. Topic four surveys the current war activities of the United States. Topic five compares the peace settlements made at the end of the first World War with the present plans of both Axis and democratic nations for the future of the world. And topic six consists of discussion as to how secondary-school pupils can best contribute to the war program of the nation.

Activities in English classes were co-ordinated with each of the major topics studied in social studies classes. A complete outline of procedures and outcomes were developed. Two special units were taught in all science classes: "Foods for Defense" and "Help for Defense." The purposes and accomplishments of each were outlined somewhat in terms of anticipated outcomes. Related outlines were also developed by the language and by the home economics departments. As an introduction to the work on the war unit in the various

classes throughout the school, the staff of the school paper prepared a special edition covering the different activities of each of the departments.—T. R. Horner, Principal.

8. The Sherwood High School of Sandy Spring, Maryland through its social studies courses, teaches the aims, issues, and progress of the war and peace. The causes and results of the great migrations of people, a review of territorial and economic problems, current events, types of governments, democracy wherein there are outstanding comparisons of facts and figures, geography in which the gain is tremendous, and the effects of such things as the Industrial Revolution are some of the items stressed. In general the war provides the school with an excellent chance to teach democracy; to teach conservation and its related subjects, of which there are many; to teach the value and method not only of becoming a good citizen in mind, but also in body; and lastly to offer the teachers and pupils a challenge to their ability, ingenuity, and citizenship.—L. J. Welch, Principal.

9. The social studies classes of the Dowingtown (Pennsylvania) High School have developed outlines related to present-day problems arising from the war. These form a part of the regular program of the school. Some of the topics studied and discussed are: What are we fighting for? Who are our enemies? Who are our allies? and What do they stand for?—W. N. Butler, Principal.

10. The most apparent change effected in this year's work in social studies teaching of the Jonathan Dayton Regional High School of Springfield, New Jersey has been an increased conscious re-emphasis upon the fundamentals of Americanism. All subject matter presentation has had this as a fundamental purpose. By this technique and by direct answer, the school has faced the question "What Are We Fighting For?" Further, there has been an increased planning to present principles and facts of American history positively—to show the various areas in which democracy as a form of government is superior to competitive governments. In this way the school tries to show that democracy is worth living for as well as worth dying for. The subject matter content has been revised and revamped to include background for the war against which current events become more meaningful and significant. In this regard, more time has been devoted to this study of and comprehension of current events materials. Essentially then, changes effected this year in view of the war have been largely in the area of shifting emphasis, selection of subject matter, treatment of the war itself—issues, causes, results, and effects, in a word, to have the teachers become "evangelists" for the American way of life.—W. W. Halsey, Supervising Principal.

11. Home-room topics were developed for the purpose of educating the pupils of the Pittsfield Community School, Pittsfield, Illinois with regard to their part in the war, the effect of the war on them, and the importance of calm,

thoughtful and purposeful study and action. Material used included: the issue of the *Consumer's Guide* that dealt with conservation of food, clothing, and home equipment; the issue of *Reader's Digest* containing "Education for Death" for contrast with American education as discussed in the article "Brit-ishers, Know Your America"; and the pamphlet *What the War Means to Us*. The pupils listened to President Roosevelt's speech to Congress and the declaration of war. Several speakers on public health were obtained. Thus, the school attempts to teach the pupils the aims, issues, and progress of the war.—W. E. Koontz, Principal.

12. An important phase of the war-time effort at the high school in New York Mills, Minnesota is the presentation of facts and the interpretation of the facts to the public. To this end the social problems class conducted open forums in the school auditorium. A clearer understanding of the nation's problems and the action taken by the government was evident. Each member of the class also took the responsibility to present facts and to clarify misconceptions whenever it was necessary during conversations with members of the community.—M. Sonstegard, Principal.

X. SUSTAINING THE MORALE OF CHILDREN AND ADULTS

JAMES E. BLUE, PRINCIPAL
West High School, Rockford, Illinois

As an aid to building the morale of pupils and adults, the International and National Committee was organized in the West High School of Rockford, Illinois. The committee purposes to do this by acquainting and interesting the entire student body in the general background, geography, life, and culture of our hemisphere neighbors and the countries with whom we are fighting this war. The faculty committee consists of the heads of the social science, English, and foreign language departments, the art, music and speech directors, and the commercial geography, world literature, and modern history teachers. Six pupils completed the committee.

As a first project, an assembly program on Latin America produced by the pupils with the president of the Pan-American Society presiding, featured the native music and dances of those countries. Community singing of "Below the Border" favorites added to the general interest. Extensive exhibits, ranging from crafts, through menus and songs, loaned by Rockford College, friends, faculty, and pupils more than filled all the exhibit cases on all floors and decorated the study halls, cafeteria, and library.

Some fifty posters collected through correspondence and by personal contact of the faculty committee with the Pan American Union and other sources in Washington, D. C., museums and the main offices of the steamships, airlines, and railways, added colorful atmosphere. These are the property of the school. A variety of skits prepared by pupils under the direction of the teacher

of speech, came over the public address system each day, calling attention to some feature of the program and concluded with "Information Please." The *Owl*, the school newspaper, carried a special feature article on the program.

THE LIBRARY CONTRIBUTES

The librarian prepared a bibliography of all the books and pamphlets on those countries available in the school library. These were distributed to pupils through the homerooms. The school clubs co-operated by planning their program on some phase of Latin America which would be suitable. For added interest, posters bearing a slogan in Spanish were distributed to each room for the bulletin boards. The war-stamp seller wore a native costume. The lunch-room menus for the week contained one Spanish dish each day and the music for the lunch hours was definitely Latin American in origin. On Pan-American day, technicolor pictures of Brazil were shown in assembly. An instructor from Rockford College spent three hours at the school, discussing problems and relations with groups of social science pupils.

Chinese Relief motivated the second program, much less elaborate in scope, since the local city committee was uncertain about their plans for some time. However, the committee showed a film to a double assembly. An exhibit was arranged for the show cases on all floors. Through the Institute of Pacific Relations, the school obtained the folio of copies of murals used at the San Francisco Fair featuring the peoples, geography, *flora*, and *fauna* of the Pacific regions. These were artistic productions and are the property of the school. The school plans to elaborate on this area, possibly China, Australia, or some phase of the Far or Near East, as well as on Canada. For the former, it has already contracted for a film with speakers who would stay at the school part of a day to discuss problems and literature with groups of pupils.

Partly as a responsibility of this committee, the school has undertaken the job of teaching every pupil in the English department and those in United States history, sociology, and economics, the "Star Spangled Banner," "America," and the "Pledge of Allegiance." The music supervisor instructed groups each hour on the history of each, memory hints, and word. Drill followed in the classrooms. These three are requirements in the final examination. Pupils were enthusiastic about learning the second and third verses of each of the songs.

This work of the committee has been experimental and very interesting. The members have been most co-operative. A great deal of letter writing was necessary in getting exhibit materials. Two faculty members made trips to Chicago to contact steamship companies, airways, and the International Railways of Mexico for posters. Two others took charge of the writing and interested pupils in entering the Pan American Union Essay Contest. Other faculty and pupil members aided on the assembly program and with costumes, arranged the exhibit cases, and contacted sources of exhibits locally.



The reports from the schools show that attention is being given to the strengthening of morale of the pupils. While some schools have developed a large number of new activities which definitely develop morale, a large number are developing and sustaining morale through their regular school program. The health of the pupils, their recreational activities, their courses, their social activities are so directed that they tend to develop morale through normal procedures that schools have thus avoided high pressure measures of "selling" morale.

The reports in this section also indicate that teachers' interest in knowing the pupil and in being calm in their presence under trying conditions are contributing factors to the development of morale.

EXAMPLES OF ACTIVITIES

1. Student Council of the high school in Hobbs, New Mexico has arranged that every assembly, every class meeting, and every public gathering be started with the salute to the flag. This has been done with such regularity that when pupils see a gathering of any description that does not start with a salute to the flag, they begin to wonder why.—T. C. Bird, Principal.

2. Besides the material contributions to the war effort, it was decided by the faculty of the Notre Dame Academy of Covington, Kentucky, that it would be well for the school to embark upon the program suggested by Monsignor Fulton J. Sheen, known as the "Holy Hour." The principal states, "This was a plan by which each pupil was to spend at least one hour a day in the school chapel praying for peace. The idea of the Holy Hour was explained to the girls, the prayers for this purpose were made available to them, and they were asked to do their part. The results were truly inspiring! For day after day the chapel was filled, the prayers rang out loud and clear, and to us, of an older generation, it became increasingly evident that here was a group of adolescents, which, in spite of its fun-loving spirit and youthful frivolity, knew the seriousness of the world."—Sister Mary Agnetis, Principal.

3. The Community High School of Marengo, Illinois appointed a central committee known as the School Defense Council composed of several faculty members and the four class presidents, representing the student body. At the first official meeting, sub-committee activities were organized in such a way that pupils and teachers could contribute creatively to the movement, according to their interests. Consequently, four sub-committees resulted—Morale and Patriotism, Safety and First Aid, Education, and Sale of War-Saving Stamps and Bonds. Summarizing briefly the year's activity, it is found that the Morale and Patriotism committee has striven to accomplish a high degree of morale and patriotism in the school and the community. A conservation campaign was in existence since January. During the intervening months hundreds of pounds of paper have been collected. This paper is sold,

with part of the receipts being used to purchase a first-aid kit for school use. The remaining receipts are used to purchase materials which will aid the School Defense Council in making the program more effective. Co-operating with the Morale and Patriotism committee, the school's National Honor Society sponsored a Victory Game and Dance night. The total receipts were given to the National Red Cross. To further stimulate morale and patriotism in the school, the committee placed slogans at convenient spots around the building to encourage tolerant Americanism and conservation. The music department presented two assembly patriotic programs. A third program was prepared and sponsored by all the departments of the school. About one hundred and thirty-five pupils participated. The purpose of the program was to acquaint the community with the many activities the school is sponsoring in its all-out co-operation for the war effort.—W. E. McCleery, Principal.

XI. MAINTAINING INTELLIGENT LOYALTY TO AMERICAN DEMOCRACY

L. R. THRAILKILL, DIRECTOR OF STUDENT ACTIVITIES
High School, Shaker Heights, Ohio

Pearl Harbor established in the student body and faculty of Shaker High School the realization that a working philosophy toward the war and a program of activities which would answer the question "What can I do?" was necessary. Shaker High School has always been proud of its democratic tradition. So the first step in the evolution of any program was to bring the pupils and faculty together on common ground to think through the problem and establish a course of action. This was done through the formulation of a "Committee on Defense" composed of equal numbers of pupils and faculty, elected by faculty and Student Council respectively. Prior to Pearl Harbor, from the beginning of the school year, a faculty committee had been considering the import of the war on the organization of the school, especially in the field of the curriculum. Its thinking and planning were immediately transferred to the larger and more democratic group.

At the very outset, the Committee on Defense established a statement of principles to govern its work. The main elements were:

1. The Faculty Defense Committee, augmented by a similar committee from the Council, will be the policy forming and co-ordinating agents for the high school.
2. The duties of this committee are to include:
 - a. Supervision of the Short Course on Defense.
 - b. Establishing a general policy for and organization of a program of activities. Teachers or pupils who have suggestions or wish to start an activity should report to the committee.
 - c. Consultation with teachers and groups, who desire to start specialized activities, such as Red Cross work, with the view of unifying the program with the whole school.
 - d. Designation of meeting time and place for volunteer organization.

- e. Advising with volunteer groups as to how their proposed program can best be adapted to the whole school program.
- f. Designation of time for advisory supervision of all drives and campaigns having to do with defense.

This statement was approved by the Student Council and faculty, and discussed before the student body in all the homerooms. Immediately there arose the question of a philosophy in the application of these principles. From this committee came the following well-defined views:

- a. The preservation of democracy as the American way of life should be the constant aim of all activities.
- b. The curriculum more than ever should broaden the pupil in his background and grasp of world problems.
- c. The problem of pupil adjustment to the changed conditions should be continuously emphasized.
- d. A program of activities designed to aid the war effort should be constantly in force but definitely co-ordinated toward the common goal.

The activities of the school, both curriculum and extracurriculum, have always emphasized the democratic way of life, but Pearl Harbor seemed to emphasize the need for greater knowledge—the give and take of honest opinion and action. The need for more leaders in activities caused the student body to be studied as never before, with the result that many pupils who had done nothing but go along with the crowd emerged to take definite responsibilities and carry them to successful conclusion.

WORLD PROBLEMS DISCUSSED

At all times Shaker High School has had as its aim the broadening of the pupil in world background and problems. However, the war effort seemed to intensify this characteristic. A greater emphasis on the study of current history was created by the institution of an assembly program of lectures on "World Background of the War" given by authorities from Western Reserve University. These lectures gave impetus to further study of current events and background in the social studies classes where at least two-thirds of the student body was enrolled. In the problems course much time was spent on the question of war philosophy. Mathematics classes emphasized that knowledge as a part of the war effort. The chemistry department instituted a short course on gases. In home economics great emphasis was placed on the study of nutrition, conservation of materials, and the like. The Open Forum Club devoted itself almost exclusively to discussion of problems incident to war economy. The Travel Club, perhaps the largest of our clubs in breadth of program, emphasized South America and the Good Neighbor Policy, as well as the Pan American Club. The social studies department sent pupils as delegates to a Mock Post-War Reconstruction Conference under the auspices of Western Reserve University.

Naturally many problems of adjustment developed. In this field the principal, the dean of girls and the dean of boys broadened an already significant program of guidance. The different program of deferred enlistment for pupils who were in a quandary as to college plans, personal conferences when hasty judgment as to enlistment was evident, revamping of course programs to meet the future needs of possible enlistment in the armed forces were discharged with significant results. Indications are that this program is quite effective.

The demands of the pupil for active participation in the war effort was devoid of hysteria but laden with great seriousness and honest desire to serve. The stress of organizing these activities was enormous but wholly satisfying as the seriousness, the willingness to sacrifice time and effort, the developing of new leaders came to the foreground. Significant activities which developed were:

1. The use of over 500 pupils as registrars on the three Selective Service registration dates. The organization detail for this was great, but in all these cases pupil volunteers exceeded the requests for help. This program was carried out through instruction sessions in the social studies department.
2. About 300 pupils worked as registrars in sugar rationing. Again the program centered in the social studies department.
3. About 50 pupils canvassed in the War Bond Drive.
4. A successful financial drive for the Red Cross War Fund was completed with every pupil contributing.
5. A land army was organized with many pupils taking work under its authority in the summer.
6. A group of boys made model airplanes for the army.
7. A book drive for the camps brought in several thousand books.
8. Paper collections were organized.
9. War stamps and bonds were sold every day. Not only stamps, but bonds were purchased by the pupils. Several extracurriculum organizations having sufficient funds likewise bought war bonds.
10. The foods classes made cookies and sent them to the camps.
11. Organization of air-raid precautions and drills was carried out with pupil assistants.
12. The school band was busy all the time taking part in parades and defense meetings.

All activities were organized and carried out without hysteria. The Defense Committee saw to it that any activity given permission to organize had to contribute to the whole picture of the school's war program, so that there developed the sense of a unified school going all out for the war effort but with a well-defined purpose. During the progress of these activities a comprehensive assembly program was organized to acquaint the student body with all aspects of their defense. These programs were put on every two weeks

and, in general, were based on the different phases of civilian defense and conducted by leaders of the various units in Cleveland.

The election for student officers at the end of the school term turned on the platform for war activity. The student president elected was a member of the Defense Committee and will point his administration toward the enlargement of war activities based on the foundation of the past year. Shaker High School feels its contribution to the war effort has been both tangible and intangible: tangible in that the results of activities could be measured as they contributed to the material needs; intangible in that the democratic spirit was fostered, leadership developed, unity accomplished and a patriotism engendered which cannot be weighed but was evident in all efforts.

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Through practically everything that the school does, there runs the purpose that pupils maintain intelligent loyalty to American democracy. Schools are simply continuing their efforts toward something they have been doing since their existence—to strengthen and enlighten the loyalty of the American people. However complex the problem of doing this may be, they are making every effort to arrive at a solution. By pageantry, by music, by symbolism, by skillful supervision, by friendly relationship established among pupils, among teachers, and between teachers and pupils, by having the pupil secure the clearest possible understanding of the nature of our American democracy—these are some of the means through which the schools are attempting to achieve this objective.

Certainly the reports submitted to the Association clearly indicate that there is "no arrest of the momentum toward an enlightened electorate." The schools are making every effort toward achieving the ideal. The birthright of every American child to an education which will equip him to practice, understand, promote, and defend the democratic ideal must under no circumstances be denied. The succeeding reports give some idea of what the schools are doing, as well as how they are going about it.

EXAMPLES OF ACTIVITIES

1. The Ingalls Junior-Senior High School of Atchison, Kansas last year conducted a six weeks forum on "What the War Means to Us." This was held in a downtown auditorium and the general public was invited and urged to participate in the discussion. The forums were held each Monday and lasted the entire day. They were under the supervision of the social studies classes of the Senior High School. As a further means of maintaining intelligent loyalty to American democracy, regular participation in a flag and pledge of allegiance ceremony was held at the opening of each assembly program.—G. L. Cleland, Principal.

2. The *Cactus Chronicle*, Tucson (Arizona) Senior High School's weekly newspaper, has run more than sixteen editorials on National Defense since

December 7. National recognition has been given some of these editorials, and some of them have been reprinted by the local newspapers in their own editorial columns. An interview with the United States Colonel in charge of the Cavalry Base located at Tucson was published. Lists of the school's alumni now enlisted have been carried, and excerpts of letters from some of these former pupils have been printed. The paper's advertising manager laid out copy for a full page advertisement urging the buying of a bomber for Arizona, and in addition to national recognition in an ad-writing contest, he sold this page to local merchants for \$99. About 250 pupils competed in an essay contest, sponsored by the women's auxiliary of the Spanish War Veterans, the subject being "Unity for Victory." About half of the *Chronicle's* space has been given over to cuts and stories of various types publicizing the efforts of the school in national defense.—C. A. Carson, Principal.

3. Every year the senior class of West High School, Green Bay, Wisconsin produces an original skit for Class Day. The committee was agreed last year that the theme they must use was "Education in a Democracy." As a result, the skit developed with glimpses of all the phases of life possible in a democratic school—varied sports, music, dramatics, proms, clubs, journalistic activities—with special stress laid on the fact that a pupil did not have to participate, but might choose the things that appealed to him as an individual, or for which he had special talent. The class had selected blue and white caps and gowns for their Commencement. As a finale, the entire group was massed into a huge American flag, with flanking wings of blue. As the curtain rose on this scene, "The Salute to Education," the Valedictorian stepped forward and talked for a few moments about the privileges of being educated in a democratic country—and of later becoming an active citizen in that country. As her voice died away, the entire group sang, "I Hear America Singing."—W. J. Harker, Principal.

4. Maintaining intelligent loyalty to the American democracy has been one of the main points of emphasis in the East Senior High School at Rockford, Illinois. School assemblies feature patriotic music; significant anniversaries in American history are observed; sound films in American defense are shown; speakers on the college program of war training are obtained; Pan-American day and week is observed; special exhibits are placed in display cases; a service roster has been compiled and placed on display in the school listing all former pupils now in the service. Bulletins, both informational and directional, are prepared for pupil and teacher use. Through this approach pupils become more appreciative of their country's ideals. They feel that they are a part of the war program and that they have something to do towards its continuation.—H. C. Muth, Principal.

5. Through the social studies department of the Okmulgee, Oklahoma, High School special films showing motion pictures in the auditorium have

given its pupils current pictures of war happenings, war preparations, and ways to protect themselves during times of air raids and fires. The school likewise develops intelligent loyalty to democracy through its patriotic programs. Through pupil co-operation in the many activities involved in the war effort, pupils tend to strengthen their loyalty to American democracy. Enthusiastic assistance in the various salvage drives; stamp sales; "Paint-up—Plant-up—Repair-up" campaigns; the immunization programs for diphtheria, typhoid, smallpox, and tuberculosis tests in which there was almost 100% participation; "the care of the teeth" program in which 400 youth received special attention to their teeth;—these and many more similar activities are methods through which pupils intelligently learn to practice loyalty to democracy. As another means of teaching intelligent loyalty, all the plays, assembly programs, operettas, pageants, and radio programs have adopted patriotic themes.—W. M. Chambers, Superintendent.

6. The high school of Chandler, Oklahoma realizing the responsibility of teaching democracy and patriotism not only has emphasized this in the various social studies courses but also each morning in the assembly the pupils salute the flag and sing patriotic songs. As an outgrowth of this program they have become exceedingly conscious of their duty to their nation. This is shown by an active interest in all war programs such as the conservation of materials and the purchase of stamps and bonds.—J. O. Bumpas, Principal.

7. Under a group of teachers at the Stoddart Junior High School in Philadelphia, Pennsylvania, a series of units were developed to be used in the social science classes. The theme of the program was "Democratic Living at the Stoddart Junior High School" and the five units were outlined as follows: Democracy vs. Dictatorship; American Freedom (free speech, free press, free assembly, free conscience); Majority and Minority or Working in Groups; Am I a good Stoddart Citizen?; and Mine, Thine, and Ours. This school consists of 45 per cent Negroes while the other 55 per cent are pupils whose backgrounds are Jewish, Chinese, Irish, Polish, Italian, and Armenian.—M. B. Ginsburg, Principal.

8. The greatest value of the Lincoln High School library in Cleveland, Ohio is its aid in the molding of student opinion, its help in building morale and an understanding of the democratic way of life. By supplying books and pamphlets on war and defense and by giving access to the latest and most important material, the library contributes to the making of useful citizens, to training in the evaluation of past and present happenings, to the selection and successful carrying on of vocations, and to intelligent post-war planning. Displays and posters have managed to waken curiosity and stimulate the use of books and periodicals. A display rack for defense pamphlets and one for books on all phases of the war are in constant use in the school library.—C. H. Lake, Superintendent.

9. The Homestead Junior High School of Pennsylvania has contracted for a series of patriotic films (16-mm. sound) which depict the background, the underlying causes, and the actual execution of the Bill of Rights, the Constitution, the Louisiana Purchase, and the Monroe Doctrine. Records of patriotic songs and American ballads supplemented the presentation of these films. Recently an introductory strip of film has been added. This depicts scenes of action as a background for the Star-Spangled Banner. It will be played as a prelude to every assembly program. These films are used as a basis for home-room and classroom discussion. All eighth-grade pupils studied the flag for two weeks, preparatory to taking a test, which is under the auspices of the American Legion. This tended to create and to maintain heightened interest in the flag. Thus, through visual *media*, the school attempts to instill in its pupils a respect and an understanding of the democratic ideals for which we are fighting today and for which they might fight in a future tomorrow. It is only through a thorough understanding and pride in our present ideals that we can guide a young adolescent to a better adjustment to his complex and seemingly over-wrought environments.—Wm. O. Campbell, Principal.

10. The student body of the Arthur Hill High School of Saginaw, Michigan is divided into fifty-two advisories composed of pro-rated numbers of tenth-, eleventh-, and twelfth-grade pupils. Each teacher meets his advisory daily. The presidents of these groups form the student cabinet. The cabinet, together with faculty advisers, constitute a War Board. Each advisory has purchased an American flag which is mounted on a staff made in the woodshop and held in a standard cast by the trade school. On special occasions these uniform flags are placed in the halls just outside the classroom doors to form avenues of flags. For several years Arthur Hill has used the pageant type of commencement program. "I Hear America Singing," was the theme used last year. Dramatic episodes with appropriate musical effects portrayed the "Spirit of the Pilgrim Fathers," "The Spirit of '76," "The United States Marines," "American Pioneers," "Abraham Lincoln," "The American Cowboy," "The Gay 90's," "The American Doughboy," "The Spirit of America," and closed with the Pledge of Allegiance and the national anthem. Through such activities as these, intelligent loyalty to our democratic ideal is being instilled into the pupils.—I. M. Brock, Principal.

11. The theme of the commencement program of the Central High School in Chattanooga, Tennessee was "America in the World Crisis." The salutarian, in considering the social problem, spoke on "A Dominant Factor, Now and Then"; and the class representative, in discussing the economic problem, sketched "The Proving of a Democracy." The faculty representative in her plea that America should preserve her schools despite the war emergency, spoke on "Education, America's Greatest Arsenal"; and the valedictorian

presenting the problem of safeguarding the spiritual life of the nation, spoke on "Unchanging Values in a Changing World."—S. E. Nelson, Principal.

12. The high school of New Canaan, Connecticut has developed a very definite campaign to make the American history program truly practical in the teaching of democracy as a functioning social behavior as well as an ideal. A definite effort is made to indoctrinate democracy from a point of view of a way of life. That is, democracy is an obligation for each and every individual. Each individual is a co-operating part of the social order in which he lives. Thus social order may be strengthened and the pupil become an individual without conflict in it. Individualizing himself in a social order of which he is a contributing part taking his share, makes it possible for him to have something real. To become an individual by the destruction of the social order in which he lives, tends to create a situation that, in the end, leaves no society, and therefore, no value to him as an individual. These are some of the attitudes which the school attempts to teach.—E. F. Waldron, Principal.

13. Realizing that a high degree of morale is just as important in our democracy during this critical war period as are guns, tanks, planes, and boats, the problem of building morale has been the aim of the high school of Maumee, Ohio. Pupils have been encouraged to participate freely in democratic discussions and further to participate widely in various types of voluntary activities such as the following, which have been organized as a result of the war effort: air-raid drills, moving pictures relative to defense work, buying war stamps, assembly programs in honor of boys killed in action, collecting books and magazines to be sent to boys in camp, helping in the sugar rationing program, and building of model airplanes. By these means, it is believed that morale can be created which will not only withstand the threat of the dictators today, but it will serve our country well in the long pull.—H. H. Palmer, Principal.

14. In order to encourage serious thought regarding permanent world peace, one auditorium session of the high school of Hammond, Indiana was devoted to a review of Louis Adamic's *Two-Way Passage*. Following the presentation, pupils indicated considerable interest in Adamic's plan for bringing about improved international relations. Events and special requirements of the war are used to vitalize the teaching of such subjects as history, geography, mathematics, science, and Spanish. Emphasis is placed on permanent values and the building of character through war-time activities. Campaigns for selling war stamps and bonds and the conservation of materials should develop the habits of saving and thrift. Every opportunity is used to stress the imperativeness, not only of winning the war, but also of winning the peace after the war.—C. T. Coleman, Social Science Department.

15. Throughout the year, and especially during the last semester at the high school in Prescott, Arizona there has been an increasing emphasis in

general classwork on patriotism and education for democracy. This has evidenced itself most noticeably in classes in civics and history, and perhaps even more particularly in numerous patriotic assemblies during the school term. These were built primarily around episodes of a patriotic nature in American history and dramatic phases of the current struggle for democracy.—H. T. Cox, Principal.

16. In keeping with the war effort, the purpose of the English-speech class in the high school in Asheville, North Carolina is to impress upon seniors their obligations as citizens of a democracy. Pupils are made conscious of democratic procedures. Also, they are made appreciative of their heritage through a study of the American constitution and the meaning of the American freedoms. This study culminated with several speech activities. Some pupils wrote orations on the constitution and others made extemporaneous speeches on various phases of democratic principles. Utilizing the experiences of one of their group who had attended the National Student Congress held at Madison, Wisconsin, the class participated in a radio series, designated as the "Radio Student Congress," in which they, considering many timely problems, followed congressional procedures in their consideration.—Beulah R. Hoffman, Assistant Principal.

XII. ADJUSTING THE SCHOOL'S CURRICULUM

SAM. H. MOORER, PRINCIPAL

Dixie County High School, Cross City, Fla.

In December 1941, the faculty of the Dixie County Elementary and High School met to discuss things which the school might do to aid the community and the nation in the present emergency. As a result, the following general answers were outlined for the school:

1. Set up first-aid instruction for all secondary-school pupils
2. Collect and conserve materials needed for war
3. Provide physical education, including calisthenics, for all pupils for body building
4. Maintain and improve health through home gardens and education in nutrition
5. Co-operate with defense agencies
6. Prevent emotionalism and maintain good morale
7. Develop ability to recognize and analyze propaganda
8. Push the sale of defense stamps and bonds
9. Develop technical skills needed for boys and girls (training for technicians and nursing)

It was felt that before the school determined just what it would do, a meeting of various agencies should be held to find out what things the school might do in addition to the ideas brought out by the faculty. Invitations were sent out and a meeting was held in January with the following community agencies: Woman's Club, Community Club, Rotary Club, Red Cross,

Farm Agency, School Trustees, PTA, American Legion, Defense Council, faculty, and student body. At this meeting all of the ideas of the faculty of the school were agreed to be worth doing with the exception of requiring first-aid courses for all secondary-school pupils. It was felt that pupils should be given the opportunity to take first aid but that it should not be imposed upon all. The following additional ideas as to what the school might do were brought out:

1. Library provide materials to show what is being done by civilian defense
2. PTA have an extra meeting each month to study defense precautions
3. Pupils take part in the production of items needed by the Red Cross
4. Letter-writing club be formed to send letters to local boys in the armed forces
5. Provide home-nursing courses for secondary-school girls
6. Provide for taking care of the children of mothers who are doing defense work

It was brought out that materials needed for war might be conserved by reducing inter-scholastic competition requiring trips out of town, thereby conserving rubber, and reducing the amount of written home work required of pupils in order to save paper. Following this meeting the faculty of the school met again in January to decide on specific things to be done immediately. A letter was written to the local Defense Council requesting answers to the following questions:

1. What materials needed could be collected by school pupils?
2. What disposition should be made of these materials in each case?
3. What military training do the military authorities think schools could or should give; for example, would it be helpful to teach all secondary-school boys the rudiments of infantry drill?
4. What specific subject matter or applications of subject matter would be especially helpful for boys going into the armed forces upon graduation?
5. What training could the secondary school give girls which would aid them?

Answers were received in letters from the executive director and the chairman of the Division of Civil Protection of the State Defense Council and from the American Red Cross. The gist of these was that the OPM program for salvage of waste materials would give us information regarding questions 1 and 2. No objection was found to giving some military training in the secondary school but it was stated that the State Department of Education would be forthcoming shortly with a bulletin on this subject. The Red Cross stated that courses in home nursing and first aid were very important.

At a faculty meeting in January, committees were appointed to work out and put into effect plans for pushing the sale of defense stamps. In order to make this an educational experience for pupils it was agreed that sales would be handled by mathematics classes. Each week the percentage of purchases in each classroom would be computed. Ways are to be suggested whereby pupils may be encouraged to sacrifice buying of candy and the like in order to purchase defense stamps. Pupils also are to be encouraged to con-

vert their bank accounts into defense bonds. Another committee was appointed to work out plans for giving first-aid instruction to the secondary-school pupils.

THE ATTITUDE OF THE PUBLIC

It is interesting to note that there was considerable discussion at the meeting of community agencies concerning the substitution of emergency measures for some of the things now being done in school. Leaders in the community expressed opinions on both sides of this question. Some were very much opposed to sacrificing anything in the present curriculum stating that they did not think the school should take up so much time with emergency measures and that pupils would become disturbed and confused. Others stated that they thought the school could well "throw out" some of the things they are now doing and begin doing some things which would be of much more practical value to the pupils. It was pointed out that many of the things spoken of as "emergency measures" would be very valuable any time.

At a faculty meeting it was decided to take immediate steps to improve the health of the student body. A committee was appointed to work out a program for doing something about nutritional deficiencies. It was decided to hold two group meetings, one for the first six grade teachers and another for the teachers in grades seven through twelve to work out plans for improving the school's program in health and physical education.

Full co-operation with the local Defense Council was pledged. The principal of the school has been appointed by the Defense Council as director of messenger service. A messenger corps is being organized in the school. The school plans to enlist the aid of pupils in collecting paper and metal scrap since the Defense Council has worked out a means of sorting and storing it.

The faculty of the school is on the alert in their classes for the prevention of emotionalism, maintaining morale, and training in recognizing propaganda. Various classes are working on the development of technical skills needed by the older boys and girls. A course in home nursing is being organized among advanced home-economic pupils. This class will be taught by the county nurse. Various mathematics and science classes are giving increased emphasis to skills and information needed in aviation, radio, photography, motor mechanics, and the like. Various classes in school have already begun production of items needed by the Red Cross and are producing these things as fast as the Red Cross people can furnish materials and directions. One class of girls has already arranged to take care of children of mothers who are doing defense work, taking Red Cross first-aid courses, and doing other similar activities.

The pupils are being encouraged continually to conserve needed materials. Teachers are requiring both sides of paper to be used and are eliminating unnecessary written work. A place for storing waste paper has been con-

structed on the campus and all waste paper from the buildings is stored here to be collected for salvage.

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By and large, the school has been ever alert to meet changing conditions. It has, since its early days, been continuously adapting its program to ever-changing conditions in a conscientious effort to serve society effectively. As one studies program of the individual school, one quickly becomes aware of the administrator's reliance upon the theory that no administrator can be an expert of the best practices in all aspects of personnel management, public relations, finance, plant maintenance, instruction, and pupil guidance. He relies upon his teachers, his pupils, his custodian and even upon his lay-public for assistance, realizing that the wise use of the services of all result in the successful operation of his school program. As a result almost every school is quickly developing new courses of study or developing units to become a part of existing courses. Practically every school reporting has introduced a unit or a course in first aid. In addition, numerous other schools reported new classes in safety education, nutrition, aeronautics for boys and in a few instances for girls, Latin American history, and Spanish. A shift of emphasis in the materials presented in long-established courses is also noted.

More attention is being given to geography, to the study of the Far and Near East, and Pan America. In chemistry, synthetics, gases, and bombs are being studied; in mathematics the fundamentals of arithmetic, graphs, map scales, the use of the compass, navigation, aeronautics, triangle of velocities, trigonometry, logarithms, and problems related to army and navy form a substantial part of the courses; in physics, ballistics and other items related to the war occupy the attention of the pupils; and in social studies, as well as in the general operation of the school, greater emphasis is placed upon democracy. The University of Wisconsin High School through a committee of teachers developed seventeen units of work for pupil and teacher use as part of their *School and Defense* series. The South Dakota Education Association had a committee prepare suggestions for new and broadened courses in wartime. Some of the outlines include art, English, biology, agriculture, mathematics, and health and physical education.

Schools are developing techniques designed to implement democratic theory. More and more schools are beginning to realize that pupils should not only be taught the values of the democratic way of life but also be given the opportunity to practice democratic behavior. The following cases are representative of curriculum adjustments.

EXAMPLES OF ACTIVITIES

1. Having a teacher who is a ground-school instructor made it easy for the Arthur Hill High School of Saginaw, Michigan to organize a class

of forty senior boys in the elementary fundamentals of aeronautics—I. M. Brock, Principal.

2. For the older girls at Fryeburg (Maine) Academy, the Red Cross has instigated a home nursing course conducted by registered nurses. The girls are taught the care of the sick, the preparing of balanced diets, the proper treatment of babies, and a score of other practical subjects. The most stressed of the sub-topics of the course is *personal hygiene*, something that everyone should know more about. To acquire their home-nursing certificate, thirty hours' training is required of the girls as well as the passing of a rigid final examination.—A. N. Berry, Principal.

3. Instruction in the "Practice of Living Under All-Out War Conditions" is the name of a course recently developed by the Tilton, New Hampshire, High School. Eighteen complete units of work have been outlined as an aid to both teachers and pupils.—D. P. Matteen, Principal.

4. A first-aid course was one of the first new courses introduced into the curriculum of the township high school of Palestine, Illinois following the outbreak of the war.—A. C. Dougherty, Principal.

5. The high school in Downingtown, Pennsylvania, has introduced a unit of first aid in the health and the science courses.—W. N. Butler, Principal.

6. When the need for first-aid classes became so apparent, all physical education classes of Central High School, Bartlesville, Oklahoma were enrolled promptly in the Junior Red Cross course. One day of each week was devoted to this work and at the close of the term, 427 pupils passed the final test and were awarded Junior Red Cross certificates. This plan is being used during the first semester of the present school year.—M. W. Taylor, Principal.

7. All courses in the Cathedral High School of Wichita, Kansas have been adjusted and enlarged in an effort to meet the changing needs arising out of the present war situation. In the social science classes attention is given particularly to the history of the United States and the Constitution, including Americanism and citizenship in order to instill a knowledge and love of this country and loyalty to it. In the sciences, special effort is made to relate it to war topics. Mathematics has been strengthened to include trigonometry with special attention given to relating it to the war. Mechanical drawing, wood work, sheet metal, and general shops have been developed to give pupils special training for construction and war work.—Sister Dorothea, Principal.

8. The high school in Gloucester, Massachusetts, in its science department has given attention to war effects, war actions, types of bombs, and gas. Films were shown indicating the method of handling bombs. Assistant air-raid wardens for the building, pupil fire wardens, and messengers were selected and given definite stations. This program has been continued and air-raid precaution drills are held at irregular intervals. In the Vocational school, much time and effort has been put into the building of model airplanes by

the student members. The sheet-metal program has introduced special work required in the laying out of ship-fittings. It has also built a funnel as a part of a listening device to detect the presence of aircraft. The printing department has been called upon to turn out much extra material such as air-raid instructions, letters distributed to further the sale of war bonds, and forms for use in the government rationing programs. The carpentry shop has turned out a large number of first-aid boxes, as well as wooden stretcher frames, air-raid alarm boxes, and splints.

The art department has included work on the patterns for the model airplanes while the commercial art units have prepared special projects to aid in the sale of war stamps and bonds, Red Cross membership, and *caution* relative to conservation and reporting rumors. In the advanced courses, camouflage has been studied in detail. Culture of Latin America has been emphasized in the program through the use of dolls and model landscapes of South America. In the pre-vocational art program, the boys have spent a great deal of time preparing plates showing the emblems of the nations at war as used on the airplanes. To stress the need of physical fitness, the advanced courses have designed posters fostering a war effort in this field. The social science department has shifted its emphasis to the governmental agencies and special laws which have reference to the state of war and the constant action of war conditions in the local community. The courses in world, modern and medieval, European, and American history give considerable time in evaluating the program in those courses against the present situation.

The commercial department has felt the war impetus by the demand for help. More boys and girls had been placed in offices before the close of school than for twenty years previous. War conditions have penetrated even to the elementary courses in general business where conservation of material has been especially stressed and the necessity for censoring foreign communications as well as restricting travel by air and auto. The consumer education program has emphasized the need of substitutes, shortages, thrift, taxes, installment buying, because of the war situation. Special attention was given to the Constitution and Bill of Rights as a comparison between the rights of the individual in the United States and in Germany, Italy, and Japan in the commercial law course.

The business organization and advanced senior course have stressed statistics to enable a pupil to understand the enormity of our war program, to show the difficulties encountered in organizing things on such a large scale, and the construction and reading of graph and charts.

The stenographic and office practice courses have emphasized special drills and explanations relative to Civil Service positions and have done a great deal of intensive work on employment tests. Quantities of mimeograph, stencil, and clerical work have been done by members of this program for Red Cross

and civilian defense. National defense courses were offered for the summer in the vocational school and other courses were set up in the academic school. A course in aeronautics is being offered to all boys who have completed at least two years of mathematics. If there is enough interest on the part of boys who have not had this amount of mathematics, a second course may be started.—L. O. Johnson, Principal.

9. First-aid classes were introduced last semester during the regular school day to all seniors of the Dubuque, Iowa, High School. Since all instructors were qualified and registered with the American Red Cross, the pupils receiving a passing mark were granted first-aid certificates.—R. W. Johnson, Principal.

10. Last year the Johnson High School of North Andover, Massachusetts installed a course in "Pre-Flight Training" for interested pupils. This year it is offered as a major elective to all juniors and seniors whose mental age, as indicated by a series of tests, is at least sixteen years.—A. G. Hayes, Principal.

11. The Cotopaxi Consolidated School of Colorado is getting materials together to start a new course in Aeronautics which is designed to be a rather complete covering of both airplane principles and mechanics.

12. A few new subjects have been added to the curriculum of the high school at Hammond, Indiana. A number of established subjects have also been revitalized and adjusted to meet war-time needs. These include: classes in radio, in which the International Morse Code and the theory of radio are offered, a course in cooking for boys, giving the fundamentals of a well-balanced diet and the elements of simple cooking as basic training for some who may become army cooks; and a course in aeronautics offering elementary theory to boys who plan to enter service or civilian aviation. The language curriculum is being broadened to include Spanish, in which emphasis is placed on added understanding of our Allies to the south and to greater appreciation of Pan-American cultures; in addition a room has been remodeled and equipped for teaching health, first aid, and home nursing. Equipment not only provides apparatus for laboratory demonstrations but also includes beds and necessary facilities for teaching home nursing and first aid. The importance of proper nutrition is vitalized by experiments with the diets of white rats which are kept and fed by the pupils.—C. T. Coleman, Social Science Department.

13. The chief objective of the Arvada High School of Colorado is to prepare its pupils for defense jobs or actual military service. Major emphasis is being placed upon curriculum revision and studies are being made as to how improvements may be effected in content, method, and additions to the present studies. New emphasis is being placed upon mathematics, science, health activities, crafts, and mechanics. The school is planning to add courses in world geography and physical education this year. The citizenship department of the student government has taken over many current defense problems

such as co-operation with the local committee in the supervision of the sale of stamps and bonds within the school. Arvada pupils have purchased over \$5,000 in bonds and stamps. This is an average of \$5.00 per pupil. The FFA boys conducted the local scrap-metal drive, getting more metal than they anticipated. Last year fifteen pupils were enrolled in a course in radio and code work, twenty-five in a class on photography.—H. N. Peck—Superintendent.

14. A course in home-nursing and home care of the sick is offered by the high school in Port Allegany, Pennsylvania. Early in April, five defense training courses under the direction of Pennsylvania State College were instituted. Two members of the high-school faculty acted as instructors, and the supervising principal as administrative head.—F. N. Hardy, Principal.

15. College High School of Pittsburg, Kansas is carrying on the NYA program and is making minor changes in their curriculum by introducing a one-unit course in aeronautics and strengthening the mathematics required.—W. E. Matte, Principal.

16. At the McKinley High School in Canton, Ohio a new course in South American history has proved immediately popular with the pupils who are interested in developing an understanding for the nations of the American continents.—J. L. G. Pottorf, Principal.

17. The Orleans Parish School Board of New Orleans, Louisiana has opened an Air Cadet Training Center at the Warren Easton High School. By operating three nights per week, the Center has been remarkably successful in that over 80 per cent of the pupils taking this course passed the examinations given by the government for admission to technical aviation classes. The objective of this Center is to prepare the men of New Orleans to enter and progress successfully in army aviation cadet pursuits. To this end, it offers refresher courses to men of post-high school and college training and to men who need fundamental mathematical and scientific training at the secondary level. In order to enter the Center men must meet the army's requirements as to age and physical and mental condition. Men are admitted only by certificate of admission issued by the director of the Department of National Defense, New Orleans. Almost all of the men who have been in attendance up to now have been sworn into the army, appointed as cadets and given a ninety-day furlough to attend this school before going into an army training center for final training. The following subjects are offered on an elective basis only: English, arithmetic, algebra, geometry, trigonometry, world history, science, applied topography, applied aerial photography, and aerodynamics. Pupils take those subjects which in their opinion and that of the principal, they need in order to pass the Federal screening tests for aviation cadets. A weekly program of studies is made out for each pupil which allows him to take the courses he wants. This fall the Parish offers classes such as those suggested in Dr. Stude-

baker's manual, "Pre-Aviation Cadet Training Courses in the High Schools."
—Thomas Green, Supervisor of Research.

18. The girls of Central High School of Aberdeen, South Dakota have organized a Scout defense program which functions along five distinct lines: home nursing, first aid, motor corps, child care, and recreation. The various divisions meet weekly for a period of one and one-half hours. The courses cover an eighteen-week semester and are conducted by out-of-school adults fully qualified by education, background, and experience to give instruction and guidance in the field to which they are assigned. Pupils satisfactorily completing the courses are awarded certificates of achievement and are given point credit on their extracurriculum record which is required of all pupils in the high school.—R. R. Deimer, Principal.

19. One phase of work of the high school of Lexington, North Carolina that is being stressed at this time is a school-wide instruction course in first aid. Every pupil and faculty member is required to take this course. The vocational work has been expanded. Girls are given courses in nursing, cooking, canning, sewing, knitting, and bandage rolling. Boys may elect such industrial arts courses as wingwork, welding, riveting, sheet-metal work, and other duties that are so vital at this time. The school curriculum has been designed to keep up pupil morale through varied forms of extracurriculum activities, and to keep all members of the school organization in constant touch with information of the world as it is today.—J. S. Germ, Principal.

20. The East Senior High School of Rockford, Illinois has given attention to a complete analysis and adjustment of its courses. For example, in the mathematics department special emphasis is placed in all courses on fundamental operations with integers, fractions, decimals, and percentage as background for technical work; on the elementary principles of velocities and navigation included in advanced courses; and on bulletins distributed to all home rooms giving the types of mathematics required for the various branches of service and in defense industries. In social studies classes a new emphasis is placed on the beginnings of our democracy, the Constitution, and the Bill of Rights; comparison of the democratic system of the United States with the totalitarian systems of Germany, Italy, and Japan; the Atlantic Charter, the Four Freedoms, and the need for a Pacific Charter on Latin-American relations; and on world geography.—H. C. Muth, Principal.

21. The high school of Clinton, Iowa has organized a Defense Council of leading pupils working with the principal. It is modeled after the government of the United States.—F. N. Johnson, Principal.

22. There are two phases of the war program at the Royster Junior High School of Chanute, Kansas which are directed toward an effort to sustain morale among children and adults. The curriculum, designed to help pupils live more effectively, has provided experiences that seem to meet their needs.

The school is trying to lay stress upon effective citizenship and has attempted to provide only for those areas in which pupils seem to need such training and which were within the range of their abilities to achieve satisfactory growth. Pearl Harbor brought forcibly into the thinking of all boys and girls more of the responsibilities of American citizenship. They all wanted to do something to improve themselves—something to make them more useful. The question of how they might serve was of common concern. A topic "How Can I Serve My Country" was sent to all pupils, the contents of which were discussed in all classes. From these discussions there developed an attitude toward class work that had not been apparent before. Teachers found an increased interest in all work being done; and pupils, generally, found an added incentive for doing their very best. Through this medium the curriculum has without doubt become more meaningful to pupils.—E. W. Grigg, Principal.

23. Realizing the need for definite recognition of the fact that we are in war and realizing the necessity for being ready to assist in whatever place we are called upon to serve, new courses have been added to the program of the Worthington (Minnesota) High School during the past year. Two classes in first aid are given weekly by the school nurse and local doctors. New subjects have been added to the curriculum which have a definite relationship to the war-time program. These include elements of aeronautics, theory of the technical radio, and co-operation with the state glider program. The school has also participated in the national project of building model planes.—F. J. Indall, Principal.

24. The war-time program of the senior high school in Prescott, Arizona has been a sort of cumulative *crescendo*. It began mildly enough with sporadic and isolated instances of war-stamp and war-bond buying. There was little or no group consciousness or effort. Gradually, however, as the war developed in gravity, and as the population as a whole matured in its attitude toward that war, the effort became more and more inclusive, until it has virtually engulfed the entire student body and faculty. A very direct result of that effort is the class in aircraft construction. Through contacts established by the instructor and class members themselves, each of the senior boys who composed the class can now boast the distinction of having a job in the aircraft industry.—H. T. Cox, Principal.

25. The Boulder, Colorado Public School system has approved a plan to accelerate the secondary-school course as a war emergency measure. Pupils qualified to undertake an intensified program may be permitted to do so upon application to the guidance board, which passes on the applicants' qualifications. They may either carry five academic subjects during the regular year or earn additional credits in the summer session. Pupils who have successfully carried intensified programs may be allowed to graduate early. They will be issued diplomas at the exercises the following June. They are not permitted

to be graduated before the completion of the junior year. Acceptable reasons for carrying intensified programs include (1) entering college early, (2) accepting stenographic and clerical positions, (3) entering music training, and (4) entering defense training courses.—G. D. Baker, Superintendent.

26. At the Sugar Grove, Illinois, Township High School the pupils and their parents were consulted relative to the advisability of trying to shorten the school year by lengthening the school day or operating school on Saturdays. The preference of both pupils and their parents was to run school as usual in so far as possible. The pupils are glad to have the privilege, however, of leaving school at 2:30 P.M. when farm work is pressing. There are several asparagus growers in this locality and some of the pupils were needed last spring for cutting this crop. Wartime makes it difficult to get the asparagus cut and allow the pupils to get to school by 8:30 in the morning. Some adjustments were made here in that no pupil was counted tardy if he arrived at school in time for his first class. Some of the pupils had study hall during the first period and in a few cases they had no classes the first two periods. They were in a position, therefore, to get a considerable amount of work done and at the same time not jeopardize their attendance records.—J. E. Shields, Principal.

27. Following the recommendations of the U.S. Commissioner of Education, the Drury High School of North Adams, Massachusetts is teaching in all science classes first aid; the proper defense against incendiary and demolition bombs and poisonous gases; and electricity as applied to motors, dynamos, hydro-electric plants, and to communication, including the telephone, telegraph, and radio. The school is trying to make the pupils air minded by stressing mechanics as applied to aviation, because so many pilots are required. In addition to the general work the school has established a course in aeronautics, carrying a credit of ten points. Some thirty young men who are interested in trigonometry and solid geometry, in order to join the air corps, meet two nights each week at the school. One of the teachers volunteered his services to the boys as part of his war work. As a further part of the war program, a course in elementary training in radio presents the fundamental principles of electricity and radio, the propagation of radio waves over the surface of the earth, as well as the modern types of equipment used for receiving them. Part of the course is devoted to a study of the operation of the various parts and their combination into a radio receiver. The principles learned about the various parts are applied to the construction of a short wave transmitter and receiving set by the class.

A telegraphy course was started under the joint auspices of the Boston and Maine Railroad and the placement bureau of the school. It was sponsored by the railroad to obtain qualified young men as telegraphers to meet a demand caused by the increased railroad traffic and vacations for telegraphers.

Seven seniors and one graduate enrolled in the course. These selected young men meet daily at the local railroad station where a classroom has been equipped by the railroad. They pay a small monthly fee to help defray the cost of equipment. There is no cost to the city. This course can be of value to these young men, both as a vocation and eventually for the military service if necessary. If they successfully pass the examinations, they are employed as relief telegraphers and station agents. As suggested by Federal and state departments of education a half-year course in Latin-American relations, stressing the history, economics, and cultural and diplomatic background of our neighbors to the south, has been introduced. Relations with Latin America play an important part in our government's effort to create inter-American solidarity against Axis intrigue.—D. W. Fowler, Principal.

28. The Hill School of Pottstown, Pennsylvania has established a number of courses in military training, geared in such a way as to satisfy the relative ages and classifications of the boys. Each course counts as a half unit of credit both for graduation and for admission to college. A candidate may earn one, and not more than two, units in these courses, which the school accepts towards the fifteen required for graduation. Likewise, the colleges will accept these units for admission, provided the candidate meets satisfactorily the requirements in such subjects as English, mathematics, and languages.

The military training courses are as follows: introduction to American history, for Second and Third Formers in place of Latin, three periods per week; backgrounds of contemporary history, with emphasis upon the present world struggle, for Fourth Formers in place of ancient history, four periods a week; Fourth Form mechanics, four periods per week; Fifth and Sixth Form mechanics, four periods per week; aeronautics and aviation, three periods per week during Fifth and Sixth Form years; radio and communications, four periods per week, elective for Fifth and Sixth Formers; meteorology, four periods per week, elective for selected Fifth and Sixth Formers; theory of navigation and seamanship, four periods per week, elective for Sixth Formers who are carrying trigonometry as a parallel course; basic mathematics, elective by boys who need the work to strengthen their mathematics background; aerial map reading; and V-7 mathematics, advanced work in trigonometry and logarithms, including elementary surveying. In addition, the following non-credit courses are available: rifle range, skeet shooting, special body-building exercises, first aid, and participation in both senior and junior Sunday-night forums on national and international topics. This course is developed upon the theory that it would be a grave mistake for any non-military school to concentrate on an intensive program of military training at the expense of its present curriculum.—J. I. Wendell, Headmaster.

29. Much has been done by the teachers and pupils of East High School of Erie, Pennsylvania to further the war effort. The pupils have taken the

matter seriously and are glad to have the opportunity to contribute their efforts. Previous to December 7, 1941, many of the clubs and sewing, shop, and art classes were working co-operatively on "Bundles for Britain." With the entry of the United States into the war, the school raised a substantial fund for the Red Cross emergency fund, also for the USO. The regular sale of war stamps was held in each homeroom, of which the Junior Red Cross took charge. The band and girls' drum and bugle corps took turns, with the music organizations of the other schools in the city, escorting the Selective Service men from the armory to the Union Station where appropriate exercises were held under the auspices of the local Sons of the American Revolution.—W. E. Coon, Principal.

30. The high school at Alpena, Michigan has organized a Defense Council among its student body. The council is composed of the following branches or committees: foreign countries, garden, correspondence, conservation, book collecting, poster, forum, and speakers.—C. E. Hinchey, Principal.

31. The accomplishments of the George Washington High School of Indianapolis, Indiana have evolved chiefly from the planting of ideas among the pupils by progressive alert teachers. These teachers have given much time and thought to guiding the pupils in developing these ideas. When sufficient student opinion has developed, the subject is placed before the student council, discussed, adopted, and implemented by the appointment of student committees who then work under the sponsorship of the teacher originator. The school believes that this is the proper way to train for democracy, with student responsibility and faculty advice to furnish fuel with high octane content.—W. G. Gingery, Principal.

32. The Girls High School of Anderson, South Carolina has intensified its commercial program. Courses are five months in length and meet for one hour three afternoons a week. A small fee is paid for these intensive courses since they are open to teachers, married women, and others who wish to get office training. The home-economics department offers courses in first aid, nutrition, home nursing, and foods and clothing. The social studies department offers junior first aid, standard and advanced first aid (after school), and first aid detachment.—T. L. Hanna, Principal.

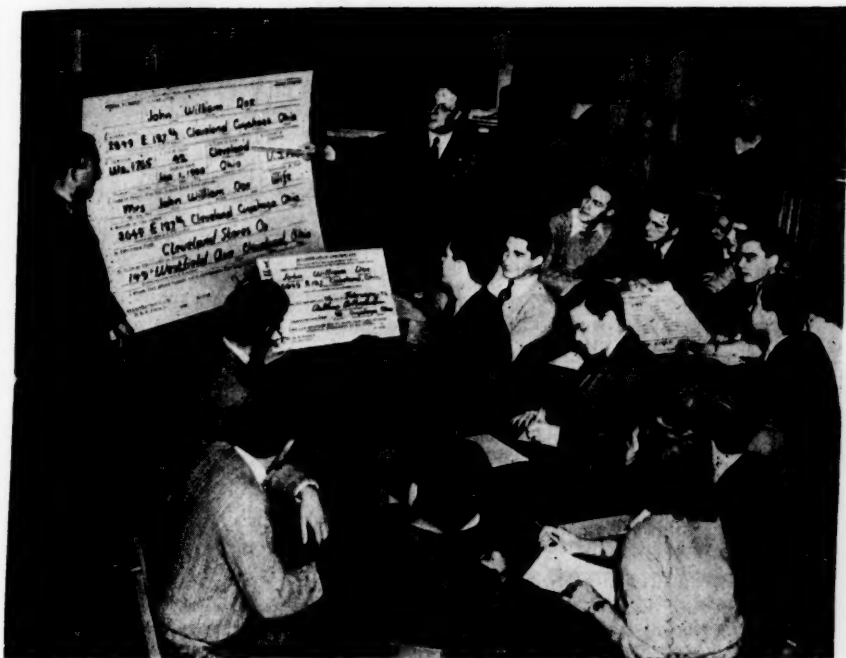
33. The teachers of all departments of the Jonathan Dayton Regional High School of Springfield, New Jersey held a conference as a means to adjust and expand the instructional program to meet more adequately present-day demands. The most significant general outgrowth was the participation of most English teachers in their own follow-up conference with a study of four areas: Effective teaching through Democratic Procedures, Revision of Literature Subject Matter, Propaganda Analysis, and Maintaining the Cultural Essentials of English. More specific outgrowths have varied from teacher

to teacher. All participated in the Clark Township "Why I'm Glad I'm An American" essay contest with some making it class wide for all pupils. All teachers gave some obvious modification of method and emphasis in adjustment to current needs. The greatest impact was in the preparation of the commencement program through the senior class. Both the method of developing the program in discussion and committee, and the focus of the program theme, "The Spirit of '42" reflects the war emphasis.

In general, the mathematics department has changed its courses so that they are more in tune with war-time needs. It has stressed more than ever this year a review of the fundamentals of arithmetic and numerous currently important applications in industry, aviation, and the military services. Because of the importance of scale drawings in maps, surveying, and navigation problems, a great deal of time is devoted to them in general mathematics. Many aviation exercises are now solved by scale drawings rather than by trigonometry. In general mathematics, these topics received greater emphasis: shop applications, proportions (especially for prospective nurses), and exercises in gun trajectory. In the college preparatory mathematics courses, trigonometry is given more time. A brief unit was added in plane geometry on the tangent relationship; in algebra several weeks were spent on the sine, cosine, and tangent as well as logarithms. Geometric constructions as related to blueprint reading are covered rather than formal proofs. In trigonometry, the mil was related to the radian and conversions were carried on between the different angle measurement systems. Later problems were introduced on simple applications from army life. In field mathematics some fundamentals of surveying and artillery orientation are included. In all courses the trend has been away from theory and formal proof to currently significant applications. In the commercial, the industrial arts, in foods, in clothing and in the sciences, a definite shift of emphasis on certain specific phases of subject matter with respect to needs of the pupil and the nation has been made. The entire secondary-school program has been developed to give pupils a firm foundation in subject matter that will prepare them for further training along more specific lines. In most of the courses new subject matter and re-emphasis of the usual content can be brought in that will better prepare them and give them a greater appreciation of the value of an adequate background of educational training.—W. W. Halsey, Supervising Principal.

34. The pupils of the high school in Montclair, New Jersey have organized a student Defense Council which acts as a clearing house for all student activities.—H. A. Ferguson, Principal.

35. Emphasis in the Senior High School of Farrell, Pennsylvania has been placed on the academic and on science and mathematics. As a result most pupils are enrolled in second-year algebra, chemistry, plane geometry, and physics. The curriculum has been expanded so that greater emphasis is



The Director of student activities of the Shaker High School, Shaker Heights, Ohio, instructs pupils in the procedure for Selective Service Registration.

now being placed on health through nutrition. As a part of the regular instruction, talks on this topic are given over the school's public address system and over the local radio station WPIC. Studying and discussing the development of totalitarian nations and their conflicts with democracy and discussing the war aims of the democracy and principles for governing the peace have become a very important part of the social studies program. Through this, pupils begin to understand the privileges and responsibilities of American citizenship. The advanced science courses for pupils enrolled in the general curriculum is designated as descriptive chemistry for eleventh-grade pupils and descriptive physics for twelfth-grade pupils. Spanish has been added as an elective in tenth and eleventh grades. Cooking has also been added as an elective for boys in the eleventh and twelfth grades. Aviation is an elective for boys and girls in the twelfth year.—W. R. Anderson, Principal.

36. Immediately upon the declaration of war, the high school of Wildwood, New Jersey lent every facility it possessed to the local Defense Council, the Red Cross, and to the government. The boys who owned bicycles were formed into a messenger brigade. Another group became volunteer junior firemen. Still a third organized themselves into air-raid wardens. Boys and girls alike enthusiastically joined the Junior Red Cross and worked on numerous projects such as knitting and salvaging waste materials. Collections were made of paper, cancelled stamps, phonograph records, tinfoil, and rubber. Many books and magazines were brought in for the service men. When a need arose for stretchers, splints, and first-aid kits for the Defense Council, the shop boys went to work and soon had all that were needed ready for service. Early in the year the Red Cross put on a benefit show for funds for the prosecution of its work. The school band and other musical groups assisted liberally. In a similar manner many other organizations were aided.—J. P. Lozo, Principal.

37. During the present year many of the principal courses of the high school of Chandler, Oklahoma are being stream-lined and defense-lined. Science and mathematics are being emphasized.—J. O. Bumpas, Principal.

38. Although the Saint Raphael Academy of Pawtucket, Rhode Island is not so situated as to be able to teach technical work, it has been placing great stress on physics, chemistry, and the regular mathematics—algebra, geometry, trigonometry, and solid geometry—with a view to preparing boys in these essentials for entrance into service. Elements of navigation and the application of science and mathematics to aviation are emphasized. Courses in Latin American history and commercial geography have been introduced in an effort to develop the Good Neighbor Policy and to indicate world trade and resources. Plans are now under way to introduce work in drawing and the fundamentals of aeronautics.—Brother Thomas, Principal.

39. The high school at Marengo, Virginia has provided first aid, nutrition, and current events classes after school. These classes are attended by pupils, teachers, and townspeople. The physical education department does especially gratifying work through its physical-fitness program. The senior class in government is studying a four-week course entitled "Our Neighbors to the South."—W. W. Wilkerson, Principal.

40. The high school in Chenango Forks, New York has a full Red Cross first-aid course taught in the evening by a local doctor. To date more than fifty persons have been certificated through this course for Red Cross work. The school also provides Air Raid and Post Warden courses with the principal of the school as instructor.—M. G. Pattington, Supervising-Principal.

41. The Hamilton Township High School in Trenton, New Jersey has attempted to relate all courses used in the school to war-time activities. English pupils through a committee made reports on aviation planes and their

identification. The mathematics courses included broad application to shop work and the use of formulas. The unit on the elementary phases of aerodynamics has been introduced in the physics courses. In the Guidance department dozens of war-time jobs, skills, and trades needed in the armed forces are indicated. The art classes design and make victory posters as well as help with the various salvage drives.—A. H. Flury, Principal.

42. The John Burroughs High School of Clayton, Missouri is continuing to emphasize and to give its pupils a better understanding of and practical experience in American ideals and values. It is emphasizing courses in English, mathematics, science, practical arts, history, language, fine arts, and physical education and health instruction. The community is being used as a laboratory in most areas of school experience. Trips for a day or part of a day are frequent. The community is also brought to the school through the visits of men and women of many different interests and accomplishments. Industry, labor, the negro, the army, the navy, and the air forces all furnish information and a point of view valuable to the pupil in developing understanding of the world in which he lives.

Since the beginning of the war many curriculum changes have developed. In physical education, one period of an hour and a half of organized play has always been required each day of all boys and girls. An additional fifteen minutes of setting-up exercises have been provided at the beginning of each period for the boys of grades 9, 10, 11, and 12. A four-weeks course in boxing is also required of all boys in these grades. Every boy in the school has elected to study mathematics this year. In the three upper grades where biology, chemistry, and physics are taught, such topics as communication, conservation, electricity, and internal combustion engines are being stressed. A new course, meteorology and navigation, has been added. Such topics as weather, clouds, air currents, map reading, radio, aero-dynamics, aerial navigation, and marine navigation are included. The class meets four times each week for one hour before the regular school day begins. It was offered to seniors and elected by sixteen of them. The shop facilities have recently been greatly increased. Today the school has 5,000 square feet of floor space, and a total of 600 pupil-periods per week. Girls and boys alike work there, being instructed in mechanical, architectural, and engineering drawing. Emphasis is placed on the use and care of tools and machines. There is metal work, wood work, and welding. Every effort is being made to bring about a better understanding of the culture and problems of Central and South America. The history courses contain special topics on Latin America.—L. D. Haertter, Principal.

XIII. CO-OPERATING WITH THE COMMUNITY

MERLE F. HURD, PRINCIPAL

Union High School, Williamstown, New York

Union High School, situated in a village of about four hundred residents, is a small school with only forty-two pupils in the academic department. Many of the community's defense efforts center around the use of the school building and equipment and the assistance of the faculty and pupils. The school building has been used for various defense meetings—selective service registration and gasoline and sugar rationing have been carried on there under the direction of members of the faculty; a free public vaccination and toxoid clinic was recently held there; teachers and some pupils have participated in nutrition and home-nursing classes. The principal is chairman of the Evacuee Committee and co-chairman of the Defense Committee for the town. All but one faculty member passed a twenty-hour Red Cross first-aid course; three teachers completed the nutrition and home-nursing course; several faculty members served as airplane spotters, and all members of the faculty have bought war savings stamps and bonds regularly.

Academic pupils alone bought \$224.45 worth of stamps and bonds last year. This averages \$5.34 per pupil; yet unfortunately only about half of the student body felt able to buy stamps regularly. All pupils assisted in collecting collapsible metal tubes. Eleven acted as airplane spotters, and one senior boy is chief observer for three townships. Fourteen completed the 4-H first-aid course, and several studied first aid as Girl Scouts. One girl completed the Red Cross nutrition course; seven boys helped collect waste paper in co-operation with the Boy Scouts. All but four academic pupils have now voluntarily received vaccination and toxoid treatments.

A school defense committee was formed, consisting of one senior as chairman, the principal, one faculty member, and a representative from each class. This group conducted the stamp sales, made and put up posters, painted and lettered collection barrels for the school and post office, sold Christmas seals, collected for the infantile paralysis drive, participated in assembly programs on defense themes, and distributed victory garden and evacuee materials throughout the village.

During the year a Parents' Night play was presented depicting scenes in the growth of democracy which was written and performed by pupils. The PTA, with pupil assistants, served hot lunches twice weekly using surplus-commodity foods. An air-raid alarm horn was installed on the school building.

Curriculum adjustments, especially in social studies, were put into effect in order that more emphasis might be placed on democratic ideals. More-

over, the school spent about one dollar per pupil on current magazines and newspapers in the belief that an extensive knowledge and awareness of current affairs is necessary in a democracy. In all these ways has the national defense program become a part of the life and thought of the school and community.

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The success in modern war requires the complete integration and co-ordination of all efforts. Throughout the nation the schools have recognized their patriotic duty in giving assistance and co-operating with all worth-while community activities. As a result of this school-community co-operation the schools have become the center of a training program for both youth and adult population. The school staff and pupils have assisted enthusiastically in the conduct of all types of activities needed for the successful promotion of the war effort. The school has co-operated in every way possible with the local Defense Council. Many schools have set up a somewhat similar Defense Council organization within their own walls. Here the pupils not only gain experience in the conduct of the work carried on by such an organization but they also gain experience in working co-operatively with other agencies whose interests are different from their own. The few examples which follow give only a slight indication of the co-operative spirit that exists between the community and the secondary school.

EXAMPLES OF ACTIVITIES

1. The activities of Westerly, Rhode Island, High School teachers and pupils in connection with the national defense organization have been numerous. The complete staffs of all the schools of the town co-operated in all draft registrations and in all rationing registrations. Nearly all of the more than eighty teachers in the system took the standard Red Cross course this past winter and several are now listed on Red Cross rolls as qualified instructors of first aid. Four members of the present secondary-school staff are Air-Raid Precautions instructors and have taken part in the instruction of air-raid wardens and other local defense agencies in the three ARP schools held in this community to date. Several instructors have engaged in summer and evening schools in which defense-training classes were conducted. Teachers of the schools made a house to house canvass of every home in town in connection with evacuation plans and members of all schools served as registrars on a Saturday at which time tags were issued to all children of the community in anticipation of possible evacuation. School teachers are serving as aircraft spotters, control-center operators, air-raid wardens and as members of volunteer first-aid units. The place of the pupils of the high school in the matter of air-raid precautions has not been overlooked. Instruction by means of motion picture films on fighting incendiaries, protect-

ing themselves against bomb and gas attacks have been given to pupils as a group. Plans to scatter pupils in relatively small groups in the safest portions of the building have been made and numerous air-raid drills have been held.

A first-aid squad composed of pupils has been formed and is given weekly instruction in first aid by a qualified faculty member. Another squad of pupils is called the fire squad. It reports for duty at the time of air-raid drills on the upper floor of the building prepared to take care of incendiaries or fires which they may start. Drill in the use of pumps and other apparatus is also a part of the training of this squad. Another group of pupils reports to air-raid shelters as messengers who are prepared to deliver word from one part of the building to the other in case the telephone service is interrupted. A group of girls who have had some elementary nursing instruction will staff an emergency hospital first-aid room located in the school, and another group of girls will be prepared to serve meals to pupils who might find it necessary to remain at the school for several hours. Numerous boys are co-operating with the local defense council as messengers and some are qualified air-raid wardens. Some of the girls have enlisted with first-aid units and a large number through their school-club work are engaged in sewing and knitting in co-operation with the local chapter of the Red Cross.—C. E. Mason, Principal.

2. Several years ago at the bottom of the depression, The Central High School of Cazenovia, New York, attempted to fill a need in the community by finding jobs for both pupils and graduates. Today the shoe is on the other foot and it is now trying hard to find people to work for the same folk who helped them find jobs for boys and girls during the past ten years. The community is a rural one and has not provided defense training classes because the boys and girls come from farm homes where there is just as great a need for help at this time as there is in the shops of the neighboring cities. The faculty of this school has always worked with the community groups on nutrition, home nursing, and welfare organizations. The buildings have always been used as meeting places for those organizations. The only difference in the present situation is that more people in the communities are interested and are attending these classes. At the same time defense classes for air-raid wardens, firemen, police, as well as half a dozen Red Cross first-aid classes have been added. The music organizations of the school have always played a great part in community life and are called upon now to deliver much more than usual.—W. L. Lowe, Principal.

3. Indianapolis school boys selected to serve as safety patrol officers at the city's various public schools this fall received their training in September at a patrol officers training camp. Approximately 300 boys attended the camp for the five-day training course August 31 to September 4, according

to information from the International City Managers' Association. First of its kind in the nation, the camp has been held annually for six years under joint sponsorship of the Indianapolis Safety Education Council and the Indianapolis Parent-Teachers Association. Nine major courses of instruction are included in the five-day training curriculum. The courses are history and organization of patrols, patrol work, problems of leadership, school district duty, safety at school, safety on the street, fire prevention, first aid, and water safety. The safety director of the Indianapolis public schools served as commandant at the camp, which was located at the Boy Scout preserve near the city. The camp instructional staff was made up of twenty or more school teachers and principals.

4. The faculty of East High School, Erie, Pennsylvania has been active in the community war effort. They have done their part in selective service and sugar rationing registration, and in Red Cross work. Several members have taught defense classes at night. One has been active in OPM instruction work. Many have registered for civilian defense voluntary duty. Members of the faculty who have attended the state or national OCD schools are instructors of general information and of gas defense on the training staff of the Erie County Council of Civilian Defense. One of the faculty is a Red Cross first-aid instructor and others are preparing for this. Civilian protection information has been disseminated in printed form through the schools. The school has shown civilian protection films. Scripts have been prepared and given over the air with the co-operation of the two local radio stations, WLEU and WERC. The Education and Training Committee chairman, as well as Public Relations chairman of the Council is Superintendent of Schools. Thus, East High School is attempting to do its bit of the unusual while carrying on its necessary and essential functions.—W. E. Coon, Principal.

5. Farmers of Washington State, faced with a shortage of labor for July and August harvests, used junior and senior high school pupils in tending and harvesting truck-garden, berry, and other crops which contribute heavily to the food reservoir of this important defense industry area. Thousands of workers were recruited from schools throughout the state under a state-wide "Food for Victory" program. In the Seattle and Tacoma areas, representatives of schools, the Parent-Teacher Association and the U. S. employment service marshaled the potential farm labor capacity of the secondary schools. The program was necessary, according to the American Municipal Association, because migrant laborers no longer were available, military service and war industries had taken many farm workers and the Japanese evacuation had taken many others.

6. Seattle's first city-wide enlistment was on May 27, when pupils interested in agricultural work and who would be fourteen or more by June 1

were registered as "Food for Victory Volunteers." Tacoma pupils were registered some weeks later. They were paid up to fifty cents an hour for their labor—a sum equal to the harvest wages of adults. Registration cards were used as an index to the potential farm labor supply but not for direct referrals. Boys and girls who register reported to United States employment service headquarters as labor needs were announced. The young agricultural workers were transported to and from truck gardens and berry fields in buses operated from central depots. In some instances many of the student workers were housed at the farms during the peak of the harvest season.

7. Due to the shortage of labor, the high school in Marshall, Missouri has had more requests for a combined school-work program. Where advisable, these pupils will be enrolled in diversified occupations. Others will be advised wholly on an individual basis. As a guiding philosophy, schools need to keep before the pupils the idea that going to school is a full-time job and when other tasks are crowded in, school work usually suffers. Employers and parents are consulted in those cases where a combined school-work program seems desirable. Proper forms to be filled out by the pupil, the parent, and the employer have been provided.—A. H. Bueker, Principal

8. Home nursing and first aid courses were extended both in voluntary and required courses in the Evanston Township High School, Evanston, Illinois. Some special courses were offered on a voluntary basis: for the year all these will be required.

Many of the subject matter departments have made important changes and additions. The social studies department has placed increased emphasis upon the interpretation of contemporary happenings, endeavoring also to provide pupils with an understanding of the causes of the war and to prepare them for accepting a full measure of responsibility in helping shape the peace that will follow. The English and social studies departments combined in the use of special material which outlined the backgrounds and the development of the war.

The mathematics department has rearranged its offering to make it possible to include in the senior year units of work which provide the foundation mathematics essential for navigation and gunnery. The science department is shifting its emphasis in chemistry and physics in keeping with suggestions made by the United States Office of Education acting as an agency for the armed services. Increased attention to consumer education, home nursing, first aid is being given by the home economics department as well as a special stress upon the importance of nutrition.

The special aeronautics ground course will be taken by a large number of pupils this year. It was first offered last summer.

The increased demands for clerical help have resulted in the commercial department's adding a special course in office machine operation and a

work experience course in which students divide their time between the school and actual work on the job.

Evening school and summer school likewise felt the impact of war. At evening school, courses in first aid, home nursing and marksmanship were introduced. Summer school offered, in addition to its usual offering, aeronautics ground course, office machine operation, motor mechanics, automobile maintenance and repair, drafting, chemistry, radio and home nursing.—F. L. Bacon, Principal.

9. One of the most effective community services was sponsored by the Americanism committee and members of the eighth-grade class of the Royster Junior High School of Chanute, Kansas. Presented to all of the city grade schools, to patriotic organizations, women's clubs, PTA groups, churches, and lodges, the programs were based upon famous American documents such as Patrick Henry's "Give me liberty or give me death" Lincoln's Gettysburg Address, the Bill of Rights, and the Declaration of Independence. Appropriate American music was played with the transcriptions of presentations, and pupils gave brief talks explaining the significance of the addresses and the music. The speakers sat in front of a large screen behind which the transcription player was operated. This screen painted blue was studded with white stars, and across the front of the middle section of the screen were the words, "For God and Country." An American shield was attached to the top of the middle section of the screen. In front of the speakers was a smaller screen of the same general design as the large one. This screen concealed the speaker to the transcription player. The setting seemed ideal for the programs.—E. W. Grigg, Principal.

10. The supervising principal of the high school in Port Alleghany, Pennsylvania was appointed by the Superintendent of Public Instruction as a member of the Advisory Council on Education to the state Council of Defense. This committee is composed of approximately twenty-five educators from the state. The meetings have been held at the state capital approximately every four weeks. The function of the committee is to act in an advisory capacity to the state Council of Defense in methods of procedure in the field of education during the present emergency.—F. N. Hardy, Supervising Principal.

11. The high school of Aberdeen, South Dakota definitely encourages its pupils to assume membership and responsibility in the various out-of-school nationally organized clubs that are being properly supervised such as Hi-Y, Tri-Hi, Boy Scouts, Girl Scouts, and American Legion Rifle Club. As a means of articulation and co-operation the school recognizes such membership on a point-credit basis in the school's regular extracurriculum program. This has been one means of taking great numbers of pupils into the community.—R. R. Deimer, Principal.

12. The Hamilton Township High School of Trenton, New Jersey has always been quite active in its community co-operative activities. When the war broke out a change in the type of co-operation was all that was needed. Pupils gave assistance in clerical work to the local Selective Service Boards. In some cases this work was performed during the school hours, but in other cases the help was given evenings or on Saturdays. Under the supervision of the knitting club and with the assistance of some adults, 120 sweaters and 36 pairs of socks were made. Blocks for blankets were made by the less experienced pupils. One hundred planes were built to scale for identification purposes in a program sponsored by the U. S. Army. Ten large cabinets to hold first-aid materials were made by the pupils at the request of the local Defense Council. Boxes of books were collected for the library of the marines at Lakehurst, New Jersey. Qualified teachers volunteered and were assigned as instructors for adult groups meeting evenings in first-aid courses, courses for air-raid wardens and canteen-cooking courses under the supervision of the Red Cross and the local Defense Council. Some teachers have also enrolled as volunteer firemen, police, and airplane spotters.—A. H. Flury, Principal.

13. The Taylor Alderdice High School of Pittsburgh, Pennsylvania has been co-operating with industrial establishments engaged in defense work by permitting pupils to work part time or excusing them from certain requirements in order that they may be of the greatest value to the country in this time of emergency. The school has co-operated with the navy department in selecting a group of about twenty-five boys who were willing to enroll tentatively with the navy with the understanding that they will be permitted to continue with their high-school and college courses without being called into active service. In addition to air-raid warden, sugar and gasoline rationing work, and special courses by teachers, the school attempts consistently to have its pupils realize the importance of continuing their education so that they might be in the future of greater value to their country than by dropping out of school now, half prepared to do some type of defense work. The result of this has been that the net loss in enrollment during the three months before the close of school last spring has been about thirty pupils.—R. G. Deevers, Principal.

14. The Whitcomb High School of Bethel, Vermont had a group of seventeen boys who were excused from school for two weeks during the maple sugar season to help in gathering the sap and boiling it down for the sugar. Several farm boys missed one or two days of school a week to help out on the farm due to the shortage of labor created by the war. Three senior boys were members of the home guard, attending drill two nights weekly, and two or three more boys acted as observers in the twenty-four hour search of the skies for aircraft of all sorts. For a period of over four months last year, the school was used five nights weekly for various courses in nutrition, air-raid instruc-

tion, beginning and advanced courses in first aid. On two nights weekly, four different classes were in the course of operation.—J. Clark, Principal.

15. The war-time program in the high school of Clarksville, Tennessee had become so burdensome that it was necessary to assign one teacher to this program for part of the school day. She is the co-ordinator of the war-time program. During her periods she handled such activities as victory book and USO campaigns, issuing of yarn for knitting, collecting paper and other salvaged materials, and certifying pupils for free lunch, free books, clothing, and other school materials. Clubs for knitting, making sweaters and socks, and about twenty other articles for the armed forces and hospitals have been organized. The manual training department made model airplanes, besides many boxes in which the Red Cross shipped materials to other cities and abroad. One group of FFA boys has been collecting and baling scrap paper for sale and has donated that money to the Junior Red Cross. Agriculture classes have been cutting up old farm machinery with blow torches so that the farmers could haul this metal to the junk yard.—H. Kirksey, Principal.

16. In co-operation with the citizens of the community, Surprise Valley Union High School, of Cedarville, California has undertaken a most extensive project of establishing communication between the Valley and neighboring towns. Surprise Valley is an agricultural and livestock producing area in northern California. The valley itself is over forty miles long, lying between two mountain ranges. Years ago telephone lines connected some of the ranch houses and two or three of the small communities. These lines have since been abandoned and now with the exception of a dozen or so phones connecting a few of the ranches only three or four miles from Cedarville, a town of about three hundred persons, there is no telephone service in the whole region. A private line maintained by the Forestry Service serves the needs of that agency only partly. With automobile travel cut to a minimum because of tire rationing, and an ever increasing danger of forest fires due to the shortage of manpower, it seemed that the time was opportune for the construction of a telephone line to serve the needs of the entire valley.

The project was begun in early spring of 1942. It was organized as an all-school activity with pupils and teachers in every class making valuable contributions. Pupils in English and social studies collected and compiled information on the advantages of such a service. They mimeographed bulletins for distribution in an effort to answer the many questions which prospective patrons and users were asking. Information for the bulletins has been supplied by science classes, who have shown why certain materials and certain types of circuits and services must be provided. Mathematics classes co-operated in figuring costs and materials needed. Other groups produced maps of the area, showing the location of farm houses and measurements of distance. Commercial pupils kept records of the discus-

sions and plans as formulated at the different meetings in the valley and also served as secretaries to the adults in the community.

Most of the organizational work has been done and it appears likely that the materials needed will be made available through the necessary priority channels. Actual construction will begin this fall. When the work starts the pupils will no doubt follow through by helping to set the poles, string the wire, and assist in other types of construction.—H. W. Hamm, Supt.

17. Among the many ways through which the pupils of the high school of Downingtown, Pennsylvania co-operate with the local Defense Council is by acting as trained messengers and "runners."—W. N. Butler, Principal.

18. Wykham Rise, Washington, Connecticut has introduced a first-aid course which was conducted by the local physician and resident nurse; thirteen of the girls received first-aid certificates. Each Wednesday afternoon a period of time is devoted to the knitting of sweaters, socks, and scarves for the Red Cross and Navy Relief, with a total of one hundred and twenty articles submitted. A number of girls, after leaving school, have registered as nurses' aids or are taking the regular nursing course. The school likewise co-operates in other community activities.—Sara M. Gaither, Principal.

19. Men teachers from the Johnson High School in North Andover, Massachusetts report to the local control center one night each week between 10 P.M. and 7 A.M. while others take over during the afternoon hours and on week ends. The commercial department of the school has furnished all the mimeographed materials for the various air-raid wardens' classes in the town, approximately 25,000 pages of material having been produced. It has also completed the typing of four hundred warden's identification records for the town. One group of pupils assisted as "minute men" in the campaign to increase war stamp and bond sales, while another group acted as an information bureau during the photographing of all civilian defense workers. These are a few of the community co-operative duties which have tended to make the past school year rather unique.—A. G. Hayes, Principal.

20. The industrial arts department of the Arthur Hill High School of Saginaw, Michigan prepared hundreds of maps and layouts for the civilian defense organizations. Teachers volunteered for many kinds of defense classes both as instructors and students. Pupils carried out farm and factory-worker registrations and assisted in registering civilian defense volunteer organization workers. Community organizations make use of the building for special programs such as the showing of military films, defense meetings, and schools of instruction.—I. M. Brock, Principal.

21. The Union High School of Downey, California has made every effort to co-operate with the community. At the outbreak of the war the school gymnasium was used for some time to billet the Headquarters battery of the Army.—C. C. Carpenter, Superintendent.

Consumer Education Study

Following a series of conferences extending over a year's time, the National Association of Secondary-School Principals at San Francisco in February, 1942, approved a proposal of its Planning Committee that it undertake a three-year study of consumer education. To support this study the National Better Business Bureau raised a substantial sum of money and turned it over to the Association to use in any ways that it sees fit.

Consumer education began to be recognized as an important part of general education during the depression, and this recognition has been intensified during the war emergency. However, in approving this study the Association sees that consumer education will also be important, both for the individual and for the nation, after peace is restored.

In charge of the study is an Administrative Committee composed of THOMAS H. BRIGGS, *Chairman*, FRANCIS L. BACON, of the Evanston Township High School, PAUL E. ELICKER, Executive Secretary of the Association, VIRGIL M. HARDIN, of the Pipkin-Reed Junior High Schools, Springfield, Missouri, and JOHN E. WELLWOOD, of the Flint, Michigan, High School. At a meeting of the Committee it elected DR. BRIGGS *Director* of the Consumer Education Study and authorized the establishment of headquarters in the National Education Association building in Washington, D. C., the work to begin formally in September. DR. FRED T. WILHELMS, previously with the University of Nebraska, has been selected as an assistant director. The staff will be enlarged as the study proceeds. The present plan is not to have a large staff in Washington, but rather to use many people in the field for co-operative help on studies that will contribute to the major project.

It is proposed to ask a number of competent men and women representing education, labor, business, agriculture, and consumers to serve as advisers, to whom problems will from time to time be submitted. It is also proposed to co-operate with existing organizations that are already interested in consumer education.

PURPOSES OF THE STUDY

The major question that the study will attempt to answer is what education do youth, of every status and location, need in order that they may become more intelligent consumers under our prevailing economic conditions? Ultimately it is hoped that the study will furnish the secondary schools a series of curriculum units, with annotated bibliographies and evaluated lists of available materials. These units will be planned for use either in an independent course in consumer education or as parts of other courses in home economics, business education, science, social studies, or other departments. Some of the units will be especially useful for home-room discussions.

The detailed plan of the study is now being developed. There already exist numerous contributions to consumer education by specialists, committees, and organizations, some of them of high importance. These materials, which

are widely scattered, some not even in print, of course need to be located and evaluated before it is known what can be used and what the study itself needs to undertake.

Exploratory studies and numerous interviews have already shown that of the people who have hitherto been concerned with consumer education, many fall into two general classes: some who wish to use the schools for promoting interests of business, and some who wish to use the schools to reform the economic structure of our society. The Committee in charge of the proposed study will carefully guard against lending itself to advance the interests of any business enterprise; on the other hand, it does not conceive its function to be the reform of our economic structure. The study will endeavor to aid the schools in their effort to make youth more intelligent, conscientious, and effective consumers in the society in which they live. It is hoped that consumer education will do more than give to individuals information that will lead to their getting more for their money; it should also help them to acquire a sound understanding of the fundamental principles of economics so that their purchases will be not only most profitable to themselves but also contribute to the maintenance of sound business and the long-run best interests of all.

Realizing the necessity of working in close co-operation with the schools, the Committee has sent out a short questionnaire to get some basic information and also to accumulate a list of names of teachers and administrators who are especially interested in consumer education. As soon as returns are received the *Director* will be ready to lay before those who are interested and willing to co-operate a series of proposals for their criticism and constructive help.

News Notes

AMERICAN EDUCATION WEEK—Don't let too little and too late apply to your general public relations program in general or to your plans for American Education Week in particular. Plan early, organize carefully, appoint your committees, make community contacts, plan newspaper and radio activities, arrange classroom and other programs, and prepare open-house plans. Do whatever needs to be done to make the observance effective in your community. Remember that the NEA has its usual supply of helpful materials for distribution. For further information write: The National Education Association, 1201 Sixteenth Street, N. W., Washington, D. C.

The general theme of the program for 1942 is "Education for Free Men." The daily topics are for Sunday, November 8, **Renewing our Faith**; Monday, November 9, **Serving Wartime Needs**; Tuesday, November 10, **Building Strong Bodies**; Wednesday, November 11, **Developing Loyal Citizens**; Thursday, November 12, **Cultivating Knowledge and Skills**; Friday, November 13, **Establishing Sturdy Character**; and Saturday, November 14,

Strengthening Morale for Victory. The sponsors of this program are the National Education Association, the American Legion, the U. S. Office of Education, and the National Congress of Parents and Teachers. Make the observance count in your community.

LIBRARIES AND THE WAR—The American Library Association believes that the American people are faced by three problems of such dominating importance as to demand the concentrated efforts of all agencies. They are, how to make our maximum contribution to the winning of the war; whether we as a nation wish to return to pre-war conditions or to continue progress toward democratic goals; and whether and to what extent we want our country to participate in the organization of the world for peace. The association therefore recommends that every library give the greatest possible emphasis for the duration of the war to those materials and services which will give people the facts and ideas that will enable them to make intelligent decisions on these important questions. It calls upon its officers to assist libraries in carrying out this program with all the means and imagination at their command. Libraries must always refrain from telling people what to think. They cannot avoid the responsibility of helping them to decide what to think about.

THE AMERICAN RED CROSS NEEDS EDUCATORS—The American Red Cross will employ hundreds of social-welfare workers and educators before January, 1943. These new employees will perform Red Cross services to the military units both in this country and with the task forces abroad. Red Cross workers give counsel to the men in the armed forces about their personal and family problems and plan and organize recreational activities. They interpret Red Cross service to the military authorities. They act, to quote U. S. Army regulations, "in matters of voluntary relief and in accord with the military and naval authorities as a medium of communication between the people of the United States of America and their Army and Navy." New professional employees needed include:

MEN—Field directors, to serve at the military and naval centers here and abroad to counsel and advise men in the service regarding personal and family problems.

MEN AND WOMEN—Club directors, program directors, staff assistants to operate clubs in leave areas overseas, some who qualify through executive or administrative experience, others by experience comparable to the operation of a large community center, and still others who qualify through recreation training and experience.

MEN—Assistant field directors for recreation, to serve with the task forces overseas, qualified to plan, organize, and promote recreational activities such as sports, games, social recreation, entertainments, arts and crafts, music, dramatics, and game rooms.

WOMEN—Medical and psychiatric social workers, case workers, and recreational specialists in military and naval hospitals both here and abroad.

Men and women assigned to the service in this country will receive from \$135 to \$200 per month; those stationed outside the United States receive from \$150 to \$275 plus an additional \$50 per month maintenance allowance in military centers and full maintenance in club work. Uniforms are provided. Those assigned abroad are also provided with certain insurance protection. Those interested in receiving further information or in making application for a position in the American Red Cross Services to the Armed Forces program should communicate with: Personnel Service, National Headquarters, American Red Cross, Washington, D. C. Those interested in a position within continental United States only should apply to the nearest Red Cross area office. They

are as follows: North Atlantic Area, 300 Fourth Avenue, New York City; Eastern Area, 615 N. St. Asaph Street, Alexandria, Virginia; Midwestern Area, 1709 Washington Avenue, St. Louis, Missouri; and Pacific Area, Civic Auditorium, San Francisco, California.

WAR-TIME VOCATIONAL TRAINING—The American Association of School Administrators and the Chamber of Commerce of the United States have announced a joint nation-wide program to expedite and expand war-time vocational training. In 1,300 communities throughout the nation the two organizations are enlisting the co-operation of school superintendents and chamber of commerce presidents in an effort to assure the workers needed in war production. "One of the most vital concerns confronting our nation today is an adequate supply of trained workers for war production," declared Albert W. Hawkes, National Chamber president in a letter to presidents of local and state chambers of commerce. "Programs of vocational training instituted prior to our nation's being plunged into war met the requirements of the national defense period. However, with conversion of entire industries to war production, the need for trained war workers is critical."

Government agencies estimate that in 1942 and 1943 war industries will need an additional 10,000,000 men and women. At the same time the Army and Navy also will be making heavy requisitions upon available personnel. Substantially all workers transferred from non-war industry must have some degree of re-training, and those entering industry for the first time must be given basic training. To effect 24-hour production, new supervisory forces must be trained to direct additional shifts of workers. To assist communities which have not taken steps to supply all needed war workers and to re-train dislocated non-defense workers for war production, the Conference Committee of the School Administrators and the National Chamber's Committee on Education have issued a handbook on **Vocational Training in Wartime**.

LOCAL FACULTY CONFERENCES FOR FALL PLANNING—Each year, the early days of September find thousands of schools and colleges attempting to get the complicated machinery and processes of formal education under way without adequate provision for opportunities for the professional staff to plan calmly and deliberately. There are problems of materials, assignments, new courses, old courses, purposes, relationships, new teachers, records, new students, old students, loose ends left from last year, use of community resources, initiation of new enterprises, committees, what problems to work on this year, how to organize the staff for co-operative effort, and countless others that urgently need the thoughtful attention of the staff. The initiation of a school year by a public school or a college is the beginning of one of the most complicated and significant enterprises of democracy. Careful planning of the enterprise co-operatively by the staff is imperative. The first requisite for meeting this responsibility is the provision of adequate time at the beginning of the school year for the members of the staff to think and to plan together. Increasing awareness of the situations outlined above is resulting in the organization of pre-school-opening conferences in which the local school or college staff works together for several days on instructional problems and plans for the year's work together. The idea of the pre-school-opening conference has developed as a technique for contributing partial solutions to the problems of finding time for the thoughtful disposition of the innumerable tasks involved in the opening of the school year, planning the program of the school as an entity rather than as numerous entities, inducting new

teachers into the situation, organizing the staff, and planning for work on instructional problems throughout the year.

In 1940 at least ten Michigan secondary schools, and in 1941, more than 22 schools planned and conducted pre-school-opening conferences of the entire staff. In most of these instances, a planning committee, composed primarily of teachers, had been selected in the spring to make preliminary plans for the conference to be held the following September. The planning committees utilized various techniques for discovering the problems of concern to the members of the local staff and planned the conference in terms of these problems, as well as with regard to the long-time year to year program of the school or college.

The conferences have varied in length from two days to a full week. The average period of time involved seems to be three days. Without exception, the more successful conferences have emphasized the socializing opportunities, the instructional problems of concern to the individual members of the staff, and the problems of relationships between the various parts of the school program and between members of the staff. The time for the conferences has been made available by reducing the length of the school year for the pupils or by increasing the length of the school year for the teachers. In some cases, the teachers have participated in the conference as an additional service to the school without remuneration. In other instances, the teachers have received remuneration for the period of time involved in the conference through the fact that the conference has been an integral part of the school year.

September of 1942 found every school and college faced with many problems of adjustment in the program to war and post-war needs. There were an increased number of new teachers in most situations. Experience has proved the values of the pre-school-opening conference. Every indication is that such a conference was an essential in the 1942-1943 program of the schools and colleges.—J. Cecil Parker, Director, Michigan Study of the Secondary-School Curriculum.

VOCATIONAL GUIDANCE FOR VICTORY—This is the title of a 120-page manual issued in September by the War Service Committee of the National Vocational Guidance Association. Including contributions by fifteen government officials dealing with the Nation's manpower, the publication brings together for the first time information on all aspects of the American wartime labor market. Special attention is given to opportunities in the armed forces, including the operation of the Selective Service and Army Personnel Classification Systems. Employment and training opportunities in war industries are set forth. There are sections on the new jobs open to women and on the problems of rural youth, the physically handicapped and minority groups. Of special value to counselors are articles on getting ready for war service, long term planning for the individual, and assisting youth with his wartime psychological problems. Edited by Dr. Harry D. Kitson, editor of *OCCUPATIONS*, the Vocational Guidance Magazine, single copies of the manual may be obtained for 50 cents from the National Vocational Guidance Association, 425 West 123rd Street, New York, New York. The publication will be sent free to members of the Association and to subscribers to *OCCUPATIONS* magazine.

SCHOOLS AT WAR PROGRAM—Opening September 25, 1942. This program is sponsored by the War Savings Staff of the Treasury Department, The U. S. Office of Education and its Wartime Commission. A salute is extended to the schools of America for a

splendid job in mobilizing their teachers and students for war-time service! Now is the time to show the nation what they are doing by enlisting in the **Schools at War** program. As a unit in this nationwide campaign, every **Schools at War** can intensify and unify its war services to save money to buy War Bonds and Stamps, to serve his community and nation, and to conserve materials of all kinds for the war effort. All schools—public, private, and parochial—in the United States and its territories, are urged to enlist in this campaign.

A Liberty Brick will be awarded jointly to the schools of each state and territory participating in the **Schools at War** program by having a state school exhibit. Replaced by recent repairs after more than two centuries of service, these Liberty Bricks were a part of Independence Hall, the scene of the signing of the Declaration of Independence, and the Constitution. Now, a symbol of our heritage of freedom, each brick is mounted in a glass case, before a colored bas-relief of Independence Hall.

A Certificate of Service, signed by the secretary of the treasury, will be presented to each school which completes a scrapbook report of its War Savings Program and other wartime activities. Clippings, graphs, pictures, essays, may be used in this report which must be completed January 7th, the day following the President's Report on the State of the Union.

Exhibits—Local, state, and national will be arranged to show the nation the power and effectiveness of its **Schools at War**. A grand display of **America's Schools at War** will be held in some central city for a week of exhibits and demonstrations. School authorities, with the co-operation of War Saving Staff officials, will be responsible for arranging state and local exhibits in order to show the public the wide range of war activities and the power of united effort. A **Schools at War** exhibit will be a public service, for it will give the public a broader view of the war effort by showing what the school children have done. **Schools at War** exhibits will be morale builders and a means for mobilizing greater community effort.

THE HIGH SCHOOL GRADUATE GOES ON TO COLLEGE—The United States Census Bureau has recently issued some interesting figures compiled from the 1940 population census. For the first time in the taking of the census, the number and percentage of the total population who have completed or partially completed a college course have been made available. This data concerns those 25 years of age and over. In 1940 in this age group 3,407,331 persons had completed four years of college work. These persons represented 4.6 per cent of the population group. An additional 4,075,148 (5.5 per cent) had completed from one to three years of college work. Thus, almost seven and a half million people or 10 per cent of those 25 years of age and over had had one or more years of college education. The west region of the United States tops the list with a total of 14.7 per cent of the population in that area having had one or more years of college education. Utah ranks first as an individual state having the highest proportion (11.0 per cent) with one to three years of college education. California heads the list with the largest percentage (6.8 per cent) of college graduates. The state having the smallest proportion of its population composed of college graduates was Arkansas with 2.3 per cent. Likewise, Arkansas had the smallest proportion of those having completed one to three years of college education (4.1 per cent). The District of Columbia, while not a state, had 11.1 per cent of its population made up of college graduates and an additional 9.7 per cent with one to three years of college education.—**EDUCATION FOR VICTORY.**

GREATER EMPHASIS ON COMMON PRINCIPLES IN EDUCATION NEEDED—

Dr. Newton Edwards, professor of education at the University of Chicago, speaking at the final sessions of the University's eleventh annual Conference for Administrative Officers of Public and Private Schools stated, "In placing emphasis on the supreme importance of developing in youth the acceptance of common values and the acquisition of a common core of knowledge, I do not wish to appear to be ruling out the spirit of social experimentation and contrivance. On the contrary, in the future we shall have to develop a social technology adequate to master the forces unleashed by physical technology. We shall have to be prepared to experiment boldly in every area of life—political, social, and economic. But we shall not be able to experiment boldly if we entertain radically conflicting value premises and if each of us has only a fragment of knowledge and experience essential to the passing of judgment on new proposals. It will be necessary to cultivate in youth the acceptance of a fundamental core of values and to lead them to acquire a common body of knowledge and experience. This is not to say that all youth must pursue the same studies and learn precisely the same things, but that youth should be equipped with a body of more or less common knowledge when they come to make decisions with respect to matters of public and social polity. Lacking essential information for the determination of an important matter of social policy, the citizen, if he is to be consulted at all, must fall back on his emotional conditioning as a basis for action. This is a repudiation of intelligence and a denial of democracy. In passing, I cannot refrain from pointing out that those who insist that children and youth be the judges of what knowledge and experience they will acquire may be pursuing a policy that points in the direction of social collapse. Certainly there is a point beyond which we simply dare not further fractionalize our common knowledge and experience." Conflicts between capital and labor, development of classes of society, special interest pressure groups, and the decline in importance of the family, the church and the community as social forces were listed as examples of the disintegration of society caused by the disappearance of a common body of beliefs and the neglect of general knowledge.

SCHOOLS NEED ALLIED YOUTH—I think that all of us who are working in the schools are being made increasingly aware of the pressing and immediate need to do all we can to help young people, particularly those in the secondary schools, have the facts concerning alcohol and to make it possible for them to meet this perplexing social problem, personally and as groups. The laws of all our states require the schools to teach about alcohol. The Educational Policies Commission urges that we do all that we can for youth. But on the whole I find that few of us are doing much about it. This does not mean that we are not interested and aware of our obligation. I think we have done little about it because we have not found a way that gets the response of our young people. Because of my own personal concern, I have been interested in looking into the service that is available to our schools. By far the best, in my opinion, are the service and materials of Allied Youth, which has its headquarters in the National Education Association building in Washington. I believe that any superintendent or secondary-school principal or teacher who really wishes to do something constructive for young people, who wishes to furnish accurate information, written in a manner that will interest them, should welcome Allied Youth's co-operation.

This movement is strictly educational and is backed by some of America's most outstanding school men. The publication of this movement is **The Allied Youth**. It should

be in every school library, in the hands of teachers in the secondary-schools and, as far as possible, in the hands of student leaders and student body. This organization and its publication are strictly non-profit. In the monthly publication, are attractively written and illustrated articles by coaches, athletes, youth counselors. The program material is of real importance. I do not see how you can get along without this magazine, if you really want to help youth. The cost is \$1, clubs of ten are \$5. This will be five dollars well spent. You will undoubtedly get your money's worth. I have felt so keenly about this matter that I have urged Roy Breg, Executive Secretary of Allied Youth, to do something to get wider coverage for **The Allied Youth** in the schools. Send your subscriptions direct to him. Other materials, such as the Alcoholfax Educational Service, are available. Roy Breg is available for school assembly talks. He knows how to talk with young people on the alcohol problem. He has spoken to more than 700 secondary schools and colleges in the past several years and school men are strong for him. Address your subscriptions and inquiries to Allied Youth, National Education Association Building, Washington, D. C.—Arthur F. Corey, Executive Secretary, California Teachers Association, Southern Section.

PROBLEMS AND RESOURCES OF THE POST-WAR WORLD—The following comments on the subject of the social studies and the post-war world have been taken from the review of the Rockefeller Foundation's work in the year 1941. These timely statements should be of interest to every school administrator: "It has been said that most of the countries of the world fear the peace even more than they do the war. To understand this fear one has only to make up any list he may choose of the important problems the post-war world will face. Here is a random selection: (1) repair of the vast physical destruction of the war, (2) re-establishment of international economic life in a shattered world, (3) organization of international political life to safeguard the peace of the future, (4) reconciliation of political nationalism with our cultural and economic internationalism, (5) restoration of tolerance and faith in a world indoctrinated with hate and fear, (6) efficient organization of government—for legislation and administration in a technical, large-unit world, (7) readjustment from war economy to peace economy so as to avoid great depressions and their wave of unemployment, (8) mitigation of insecurity—social and psychological, and (9) education of people everywhere toward greater economic, political, and social literacy."

CENTRAL MICHIGAN COLLEGE UNIFIES PROFESSIONAL WORK—The so-called "Secondary Professional Sequence" at Central Michigan College of Education is an interesting effort to unify professional theory and practice. During 1939-40, the class in adolescent psychology met four days per week throughout the year. The course was characterized by strenuous efforts to exemplify democratic classroom practices, much direct work and study of adolescents, a general survey of introductory psychology, and learning and mental hygiene as these could be applied to an understanding of teen age boys and girls. The next year, 1940-41, the course was repeated and paralleled by another entitled "Education of Adolescents" in which the students met five days per week throughout the year to study the problems encountered as they did directed teaching in the secondary school and to "cover" the general field of secondary education. The undertaking this year is an attempt to unify further the total professional experience of prospective secondary teachers in the senior year. The work is so scheduled that the student teaches one hour daily, spends two consecutive hours four days per week in a class studying psychology and education, meets

one hour each week with all students on this sequence, and, if he wishes, carries two or three hours of electives. This year there are three sections of the course in each of which a psychologist and an educationist serve as instructors. The students participating in the unified sequence earn credit of eight semester hours in Psychology of Adolescents, ten in Education of Adolescents, and eight in Directed Teaching, or a total of twenty-six semester hours for the year.—MICHIGAN TEACHER EDUCATION TOPICS.

FOOD WILL WIN THE WAR AND WRITE THE PEACE—Food is a whole arsenal of weapons in this struggle for human freedom. It is the driving force behind high production by munitions workers, and top-notch performance and strong morale among soldiers and sailors. Our national self-interest and our humanitarian instincts challenge us to do this job of producing food and do it on a scale that will write history. In the day of victory when the nations sit down at the peace table our food stockpiles, ready to be drawn on by the famished people of the Old World, will give great force to our views. For they will show once and for all that democracy builds for the needs of common men. By winning our American battle of farm production we will help to make it possible once again for men in all parts of the earth to live in comfort and in tolerance and in freedom.—**Claude R. Wickard, Secretary of Agriculture.**

FEDERAL LOANS TO COLLEGE STUDENTS—For the fiscal year 1942-43 Congress has provided a loan fund of \$5,000,000 for the assistance of college students in certain technical and professional fields. The loan program is administered in accordance with regulations issued by the U. S. Commissioner of Education and approved by the Chairman of the War Manpower Commission. Briefly the essential points are: (1) Loans are made to students directly by colleges or universities or public or college-connected agencies. Federal funds are paid the colleges upon estimates submitted to the amounts necessary for loans. (2) Loans are available only to students who are registered in accelerated programs in degree-granting colleges and universities whose technical or professional education can be completed within two years in one of the following fields: engineering, physics, chemistry, medicine (including veterinary), dentistry, and pharmacy. (3) The student agrees in writing: (a) to participate, until otherwise directed by the Chairman of the War Manpower Commission, in accelerated programs of study in any of the authorized fields; and (b) to engage for the duration of the war in which the United States is now engaged, in such employment of service as may be assigned by officers or agencies designated by the Chairman of the War Manpower Commission. (4) Students must attain and continue to maintain satisfactory standards of scholarship and must be in need of assistance. (5) Loans shall be made in amounts not exceeding tuition and fees plus \$25 per month, and not exceeding a total of \$500 to any one student during any 12-month period. These loans are to be evidenced by notes executed by student borrowers, payable to the treasurer of the United States. The rate of interest is $2\frac{1}{2}$ per centum per annum. Repayments of loans are to be made through the colleges, universities, or other agencies negotiating the loans. And (6) the indebtedness of a student shall be cancelled: (a) if before completing his course, he is ordered into military service during the present war under the Selective Training and Service Act of 1942, as amended; or (b), if he suffers total and permanent disability; or (c) in case of his death.

EDUCATION'S NEEDS FOR THE POST-WAR PERIOD—The education of children and youth should benefit greatly from the opportunities of the post-war period. Education is our largest social undertaking and offers almost unlimited possibilities

for putting material resources and human abilities to work in ways that contribute to the national well-being. Over 31 million people, or nearly a fourth of the population are enrolled in schools and colleges. Our efforts can hardly be applied to a more fruitful or more essential task than to help these individuals along the road to self-improvement and better citizenship.

One of our chief needs in the United States is to perfect an integrated system of free public education beginning with the nursery school and extending to the various phases of adult education. Good programs at all levels are now in existence, but viewed as a whole our educational achievements have been markedly uneven. . . . Recognition is growing that only the Federal government can remove the substandard conditions surrounding the education of many of our young people. It hardly need be pointed out that the education of children and youth is a matter not only of local and state but of national concern. The Federal government has long subsidized education in the states, both general education, as in its grants of land for educational purposes, and education of specific types, as in its annual grants of money for vocational education. Decisive Federal action has become essential to remove other educational handicaps from American children and youth. It should take the form of annual grants to the states for purposes of general elementary and secondary education. It is important that these grants should not disturb the control of the states over their own educational policies. Experience with other Federal grants indicates that no essential impairment to state authority need result from this relationship. Federal aid to general education is urgently required.

In many instances a child or youth fails to receive the benefit of available educational facilities because of the inadequate resources of his family. Financial difficulties usually appear to be the chief reason for the failure to continue in school to the point justified by the young person's abilities. It can be expected that this impediment will be substantially removed by the general improvement of economic circumstances which must be the foundation of any lasting program for the welfare of young people. Yet while it exists, the difficulty is so serious for the individuals concerned that special measures are justified to ease it. Until every parent is able to maintain his children in school as long as may be best for them and for society, we need a flexible program of student aid at and above the secondary level that will enable the young person or his parents to meet the expenses necessarily incident to continuing his education.—Excerpts from pages 120 and 122 of the **National Resources Development—1942** of the National Resources Planning Board.

THE COST AND FINANCIAL SUPPORT OF PUBLIC EDUCATION—During the year which ended June 1940 we spent in this country approximately two billion six hundred million dollars (\$2,600,000,000) for public elementary, secondary, and higher education. About 91% of this grand total went to elementary and secondary education. To offer the educational program needed in this country would require an expenditure of at least approximately five billion dollars a year for regular current expenses. An additional five billion dollars at least is needed for the repair of old and the construction of new school building—this estimate of the cost of needed school buildings being made on the assumption that the existing pattern of local school units would be reorganized. As is true in considering the cost and financial support of any public service the relation of the cost of public education to financial ability, financial effort to support public

education now exerted and the prevailing systems of taxation particularly in local and state governments demands serious study and analysis by all. There is no more socially important question than whether we can afford not to finance an adequate and excellent system of public education.

The financial support of public education must be borne jointly by Federal and state, as well as local governments. In general the Federal and state governments have never assumed a sufficiently large share of the financial support of public education. During the decade 1920-30 there was a marked increase in the degree of financial support of public education borne by the states. However, there are many states in which the state still has not accepted its share of the costs of public education. Furthermore, in many states the basis and methods of distributing state funds for public education do not observe the essential principle of equalization of educational opportunity, nor do they fully recognize the financial ability of the local areas to support public education.

Far too many people, including both professional educators and laymen, still do not realize the imperativeness of Federal support for public education. In redirecting and planning an educational program, educational leaders can render no more important service than to exert every effort towards the conversion of lay attitude toward the principle of equalized Federal financial support of public education.—**Planning Schools for Tomorrow** by John Guy Fowlkes, with the co-operation of The Committee on Educational Planning of The U. S. Office of Education.

INSTRUCTIONAL SERVICE COSTS IN SECONDARY SCHOOLS—A rapid increase in instructional service costs in the secondary schools of North Carolina is shown when the year 1933-34, representing the low in the state school expenditures, is compared with 1939-40. The total increase was from \$3,893,596.73 to \$8,003,089.34. Two factors, increased salaries of instructional personnel and a larger number of students in the instructional group, were largely responsible for the increase. The per pupil cost has increased an average of \$13.90, due largely to the first factor indicated above. In the case of pupils in white schools, the increase was \$14.77 per pupil, whereas for Negro pupils it was \$12.03 per pupil.

In considering these racial costs, two other factors besides those mentioned above are noted: (1) the training of the instructional personnel in white schools during this period was slightly higher than that of the personnel employed in Negro schools: (2) the salaries paid white personnel was greater than that paid Negro personnel. In 1933-34, the ADA cost per white pupil was \$31.76 and \$19.65 for Negro, or an average cost for both white and Negro of \$29.78. In 1939-40, the ADA cost per white pupil was \$46.53 and \$31.68 for Negro, or an average cost for both of \$43.68.

The highest average per pupil cost for instructional services in white schools in city units for 1939-40 was \$58.11 in Marvin while the lowest was \$25.90 in Madison; for the county units the highest was \$73.64 in Scotland County and the lowest \$35.90 in Wilkes County. The highest average per pupil costs for instructional service in Negro schools in city units for 1939-40 was \$45.40 in Kings Mountain while the lowest was \$19.19 in Elm City; for the county units the highest was \$52.13 in Tyrell County and the lowest \$20.31 in Cumberland County. The average per pupil cost for the seventy-one city units for white schools was \$43.26 and for Negro schools, \$32.21, while for both white and Negro, \$40.53. The corresponding cost for the hundred county units was for white, \$48.09, for Negro, \$31.24, and for both \$45.36.

INTERESTING FACTS ABOUT THE RAILROADS—A freight car now produces one and two-thirds as much transportation service as that of 1918. For every pound of fuel consumed, a locomotive burns about twenty pounds of air. The average length of haul for freight in 1941 was 387 miles compared with 351 miles in 1940. Freight train performance per hour is now more than twice as great as in 1920. The average amount of freight carried per train is now greater than ever before. To move a ton of freight one mile, railroads now burn one-third less fuel than in 1920. Despite an increase of 29 per cent in freight ton miles and 29 per cent more passenger miles in the first four months of 1942, there was 26 per cent fewer train accidents, 31 per cent fewer employee fatalities, and $7\frac{1}{2}$ per cent fewer passenger fatalities than in the same period in 1929, one of the safest years in railroad history. Freight car wheels are now standardized at 33 inches in diameter, compared with wheels 28 to 42 inches which were formerly used.

HARVEST CAMPS IN ENGLAND—The great contribution that the schools have made towards the cause of home food production is acknowledged in a memorandum which the Ministry of Agriculture has issued to headmasters. The Ministry say that this year the agricultural labor situation is likely to be still more difficult, and they hope that all schools will be able to co-operate again both in term-time and in the holidays. There will be a heavy demand for labor for potato planting and lifting, and it should be possible to arrange for this without undue disturbance of school time-tables. In the holidays the harvest camp scheme is the most suitable way of making use of school boys, and a memorandum has been prepared containing information and suggestions on camp organization. This year the schools will receive greater financial assistance, and the Ministry are prepared, besides providing free accommodation and equipment and making allowances for fares, to guarantee thirty hours' work a week in respect of each boy available for full-time work at "approved camps." Personal accident policies have also been arranged for. Where boys cannot attend camps, it may be possible for them to work on farms either from their homes or by being billeted with farmers individually. We feel certain that the scheme will receive the hearty support which it undoubtedly deserves. The appeal has been strengthened by the issue of a special message circulated to the schools by the Ministry of Agriculture emphasizing the "grand job of work" school boys have done during the past two years, and urging them to make an even greater response to meet this year's vital needs.—**JOURNAL OF EDUCATION**, Published in Oxford, England.

WE STILL NEED PUBLIC LIBRARIES—With public libraries rendering ever-increasing service to the government in its war effort, the coverage of the population by these institutions assumes especial significance. According to a survey recently made at the Graduate Library School of the University of Chicago by John C. Settelmayer, 96,221,760 persons have free public library service; 35,447,515 are without it. In other words, 27 per cent of our population (1940 census) does not have access to public library facilities. Of this latter group, 91.8 per cent is in rural areas.—**EDUCATION FOR VICTORY**.

MILITARY AIRCRAFT WALL CHARTS—Wall charts for schoolroom use, presenting silhouettes of American military aircraft and other means of identifying fighting planes, are available from the Air Youth Division of the National Aeronautic Association, 718 Jackson Place, N. W., Washington, D. C. A sample chart costs 15 cents.

UNITED AIR LINES EDUCATIONAL SERVICE—For several years United Air Lines has responded freely to requests from teachers and students for information, time-tables, pictures, and maps about aviation. Such requests have often totaled 200 weekly and

are increasing in number. This educational service has been expanded by establishing a **Department of School and College Relations**. Through this department they are putting progressively at the disposal of schools and libraries, a wealth of information and illustrative materials for educational ends. Believing that teachers would be considerably interested in their enlarged 1942 Mainliner Teacher's kit, they have made this kit available at 25 cents. Send requests to W. A. Wheatley, Director of School and College Relations, United Air Lines, Municipal Airport, Chicago, Illinois.

HOW MILITARY EDUCATION MUST BE IMPARTED IN MEXICO—Public military education has as its base pre-military instruction as a preliminary to National Military Service for all Mexicans. Pre-military education will start in the kindergarten, where the child will be taught with toys and figures related to the army, navy, and air force, inculcated with the cult and respect for the national flag, as well as habits of order and discipline, all taking into account the age and mentality of the pupil. In the primary schools, this foundation will be followed up until the third year, with instruction corresponding to the unarmed soldier and with teaching the pupils the meaning of sealed order, the different kinds of arms, and how to distinguish the various military uniforms.

During the 4th, 5th, and 6th years, instruction will be with regard to the armed soldier (wooden weapons being used); description of the hand grenade; instruction in hurling the hand grenade; precautions that must be taken in loading and transporting this grenade; organization of combat platoons, etc. Like instruction will be given High, Pre-vocational and Vocational School pupils, only they will be taught with regulation arms, and instructed in firing rifles or muskets; terminology of the "Mendoza" rifle-machinegun; protection from gases; individual protection; generalities covering collective defense against gases and air raids, and tactical instruction, including teaching of the individual combatant, that is: protection, observation, use of firearms and the rifle-machinegun, and the employment of grenades and training as grenadiers. They will also be taught to march with equipment that approximates regulation weight. They are also to have field instruction, so that they may familiarize themselves with actual campaign conditions.

Pre-military preparation is to be imparted to baccalaureate and normal school students in the form of exercises for preparation for combats, platoon formations, offensive and defensive combat platoons; firing practice with rifle or musket; precision firing with reduced load cartridges and regulation cartridges, marching, etc.; field work, including selection of land and making the best use of it, finding and using shelters from fire, selection of firing stations, construction of shelters, auxiliary defenses, trenches, roads, etc. For students in professional faculties, pre-military preparation will consist of adapting their studies to war activities.

Physical education will be designed to develop the military personality of the future soldiers, their fighting spirit and initiative, increasing the camaraderie sentiment, accustoming them to operating with equipment and strengthening their discipline. Physical education instructors, employed by the physical education department, must exercise particular care to inspire the principles of individual interest so as to advance the elevation of physical efficiency, thereby giving the students more stamina to withstand fatigue and develop courage, initiative, determination, and the fighting spirit by means of combative sports.

These instructors also encourage conferences, chats, conversation, or any other means for inculcating love of Country, significance of the National Hymn, Discipline, Abnegation, etc. The professors are particularly cautioned to impart all instruction in an unbiased

fashion, without personal prejudice or vanity, taking into account always the refinement, good education, and other qualities of their students, so that, in accord with the desires of the President of the Republic, the frank and lasting affection of Mexican youth can be gained by them and they shall have their greatest reward—the satisfaction of knowing that they have contributed to the preparation of soldiers and citizens who are useful for the defense of the country.—MEXICO NEWS.

WASTED MANPOWER IN AGRICULTURE—The causes of inadequate income and lack of employment among the 1,717,000 low-income farmers are deep and complex. Consequently, a program to help these farmers produce Food for Freedom must be developed in terms of difficulties which the low-income farmer faces. There, difficulties are capital and credit, supervision, tenure improvement, co-operative facilities, and health. It has been pointed out that the immediate objective of the proposed production program for low-income farm families is to produce vital war foods. That objective cannot be achieved alone by loans and supervision and the other techniques mentioned above, however. Beyond these means of assistance must be a powerful effort to open up for the nation's low-income farm population a better way of life, a future, a new world of opportunities.

There must be developed vocational opportunities for the young people on the low-income farms, tomorrow's citizens who can find hope only through opportunity to develop their abilities and thus become self-reliant through the employment of their labor. These must be opportunities for good education in elementary and secondary schools, for training in special skills, for normal intellectual development. There must be opened up to low-income farm people the opportunity to become an important part of the farm community, to close the gap that seems to stand between the disadvantaged and the more fortunate in agriculture. There must be the opportunity for neighborhood activities, for discussion groups, for community recreation, for free expression of religious convictions. Only if these opportunities are opened up for the under-employed, low-income farm families of the nation will producing Food for Freedom have the meaning that it might. The democracy that is being defended by these efforts is ultimately the democracy of the common man and woman whose individual welfare, whose status, whose place under the sun are and always have been the fundamental idea of our democratic way of life.—By Philip G. Hammer and Robert K. Buck. *Land Policy Review*.

AMERICA SINGS—The movement to promote Victory Songs initiated by the National Recreation Association has met with an enthusiastic response, and from all parts of the country and from groups of many kinds have come letters telling of the successful use of *Let's Sing the Same Songs*, the leaflets of twenty songs with music issued by the Association for Victory Songs. Now the National Recreation Association announces a collection of seven hymns with music selected with the help of leaders of all faiths. The leaflet, entitled *Seven Hymns for Everyone—One for Each Day of the Week*, includes the following hymns: "Faith of Our Fathers," "Our God, Our Help in Ages Past," "God of Our Fathers Whose Almighty Hand," "The God of Abraham Praise," "The Lord is My Shepherd," "Dear Lord and Father of Mankind," and "Now the Day is Over." Single copies of this leaflet containing these songs are available at two cents each; in quantities of one hundred, the price is \$1.10. Write to the National Recreation Association, 315 Fourth Avenue, New York City.

SECRET SCHOOLS IN POLAND—Hundreds of thousands of Polish students are today attending secret schools and learning from literature printed in underground pub-

lishing houses in occupied Poland. Imitating underground learning methods used during the century and a half when Poland was partitioned and the tongue forbidden, patriotic professors and teachers have organized what is referred to as "travelling" universities. Regular secondary-school and university courses are arranged, and examinations are held at regular intervals as in normal times. This is Free Poland's answer to the intense and thorough efforts of the Nazis to wipe out everything that would preserve Polish culture and literature.—JOURNAL OF EDUCATION, Published in Oxford, England.

THIS WAR AND THE TEACHER—Today we of the United States are caught up in a great crisis of civilization. All, we believe is at stake. A war must be won; a peace must be created. These tasks are indivisible and will require generations. We have begun the work; our children must carry it through. . . . What is the role of education in this time of conflict? What should the teacher do to serve his country? What should the people do with respect to teachers? Already there are shortages of teachers of industrial arts and agriculture, of physical education for boys, of science and mathematics, of home economics and commercial subjects, and of instrumental music. Young men are being drawn away from superintendencies and principalships. The great impending threat is of a loss of women teachers in smaller communities. And as the experienced teachers withdraw, the chances of holding college students—equally acceptable to industry—to their preparation for teaching must steadily decline. . . . The situation presents a challenge first of all to each individual teacher. To each it must be said: Do not lightly leave your post of present duty. Good teaching is desperately important in war time, and for teaching you have been educated. The chances are overwhelming that you cannot be adequately replaced. If your government calls, you will, of course, respond. But unless you are called, or unless you are fully satisfied that you can serve more valuably elsewhere, serve where you are.—Excerpts from a statement prepared by the Commission on Teacher Education of the American Council on Education. The complete text may be obtained from the Commission, 744 Jackson Place, Washington, D. C.

NEW FILMS CATALOGUE—Civilian Defense and other patriotic groups are training more and more to the use of motion pictures in their training and morale meetings. Films have been found to be the best possible stimulator of attendance and enthusiasm under such headings as War Reports, Official Government Films, Victory Gardens, Emergency First Aid, Industrial Defense Plant Training, American History and Principles, Protection against Fire Bombs, and Air Raid Warden Work. Under these headings the Bell & Howell FILMOSOUND LIBRARY has just issued a catalogue supplement, listing over 200 new films, all of them added since their 1942 catalogue was completed in January, 1942.

OUR DAILY PRESS—The third weak point in the present-day democracy is the daily press. A century ago, when freedom of the press was one of the principal demands of liberals everywhere, any group of men with talent and a small sum of money could start a newspaper and acquire an influence in the country proportionate to their ability. This was a period of free competition between small daily papers. But during the past half century the daily newspaper has become a great capitalist enterprise requiring millions of dollars for its establishment. Hence, whoever has the necessary millions is in a position to flood the country daily with tons of printed matter, although his genius may consist solely in knowing how to find out what particular brand of crime and type of feminine legs most appeal to the sensibilities of the less educated section of the population. Many of

these papers are the property of capitalist concerns, or are subservient to personal vanities, which too often do not promote the welfare of the community. The publisher of one of these newspapers can poison the mind of a whole country with mendacious stories or by the suppression of news. He is a despot who is not responsible to anyone for the manner in which he exercises his authority; he has liberty without responsibility. The press is now a dictatorship of a unique kind. Planted in the midst of free institutions, it insidiously disturbs and perverts them. The division of powers on which free government was originally based, **has disappeared, and the Fourth Estate**—the great daily press—having overcome all the other powers—the executive, the legislative, and the judicial—reigns supreme in their stead. The omnipotence of the press is perhaps the most dangerous disease which infects free institutions today. If the daily press were not so corrupt and stupid—probably more often stupid than corrupt—even the vote-catching system would not work so badly, and congressmen directed by an intelligent and honest press would be able to cut a better figure. —**Quotations from address by Professor Gaetano Salvemini**, former Professor of History at the University of Florence, Italy, at the Thirty-ninth Annual Meeting of the American Academy of Political and Social Science, Philadelphia.

THE HEROISM OF THE NORWEGIAN TEACHERS—There is a darkness over Norway today. The Norwegian people are crushed by an iron heel. A small gang of traitors have delivered over their country and their countrymen to the terror of a foreign power. This gang is conscientiously seeking to destroy the things which the Norwegian people hold sacred: freedom, humanity—the very basis of Norwegian culture. But a flame has been lit which shines through the darkness; every Norwegian is ready to play his part in throwing off the yoke of the oppressors. Today the Norwegian people know that the schools and the churches are in the very front line. They see that the Norwegian teachers are fighting despite suffering and anguish, as proud and courageous unarmed shock troops in the battle for the very foundations of the life of the Norwegian peoples: freedom and culture. The treatment of the Norwegian teachers will rouse a storm of indignation—a storm which will go far, far beyond the frontiers of Norway. We Norwegians appeal to right thinking men and women the world over: consider well what is happening in Norway. Thousands are suffering in prisons and concentration camps; many have been shot. The teachers are being driven like cattle through the land.—**Dr. A. Sommerfelt**, the Director-General of the Royal Norwegian Ministry of Education.

TRAINING IN THE ARMY—The U. S. Army has recently issued several small folders that will be of real interest to the boy in the secondary school. One of them, **Soldiers Life**, describes his travels, his education, his athletics, discipline, food, pay, retirement, etc. **Men of 18 and 19 Choose Your Combat Branch** is another short pamphlet which briefly describes eight different branches of service in the army. A third pamphlet, **Keep 'Em Flying** (26 pp.) describes three ways for those qualified to enlist in the Army Air Forces for Aviation Cadets Training. It likewise describes opportunities and the eight types of training. These materials together with other are available through the U. S. Army in Washington, D. C., or the Commanding general in the several corps areas.

EDUCATION AND THE FUTURE IN GREAT BRITAIN—We are watching a development of adolescent education in two distinct directions at the moment. Firms are releasing for part-time day education employees in larger numbers than ever before. Tribute must be paid to those firms who have thus met the difficulties of the youths in continuing

their technical studies. It is believed that this war-time experience will persuade many firms of the value of this education, to their employees and to themselves, and that it will grow on a voluntary basis from year to year. Nevertheless we feel that part-time release should be made obligatory from the statutory age for full-time education, up to the age of 18. Much of such part-time work would be vocational in character and would be centered around the Technical College. Now we turn to the second development. Youth service is being officially sponsored in this country for the first time. If part-time release for educational work is of the reconstruction scheme, there must grow up in most districts a new type of school, already tried in a few areas, and well known to us as Day Continuation Schools. This new Youth Service would in many cases seem to fuse with the work of the Day Continuation School. At the moment, the youth activity is bound to be war-biased, but one can hope that the aim of the combined Day Continuation School and youth activity will be to develop that complete personality inherent in us all—involving physical well-being; a developed mind able to appreciate and express; and a spiritual entity able to appreciate beauty in a further problem facing us on the technical side. Our organization of the vocational needs must be such as will not debar the youth of our colleges from a goodly share in physical and humanitarian activities.—*The Technical Journal*, June 1942, printed in Oxford England.

VOCATIONAL TRAINING FOR WAR WORKERS—Vocational training for war workers will occupy the principal attention of the newly appointed Committee on Education of the United States Chamber of Commerce. In appointing the committee, Eric A. Johnston, Chamber president, named several industrial executives actively engaged in different phases of war-time vocational training. The Chamber's Education Committee has been co-operating with the Conference Committee of the American Association of School Administrators to bring about closer co-ordination of business, educational, labor, and other interested groups in community programs designed to hasten the tempo of war-time job training. The two co-operating committees jointly issued a handbook on **Vocational Training in Wartime**. The committees also inaugurated a bi-monthly bulletin service—"Wartime concerned with the training of war workers. The committees also inaugurated a bi-monthly Job Training"—which provides information on programs in all sections of the country.

Thomas C. Boushall, of Richmond, president of the Morris Plan Bank of Virginia, was renamed chairman of the Committee on Education. Among those named as committee members are Lieutenant Colonel Dunlap C. Clark, Washington, D. C., former president of the American National Bank of Kalamazoo, Michigan; Carl S. Coler, district representative, Training Within Industry Branch, War Manpower Commission, Pittsburgh, Pa., and former training director, Westinghouse Manufacturing Company of Pittsburgh; John C. Harding, resident executive vice president, Springfield Fire and Marine Insurance Company, Chicago, Ill.; Ernest L. Olrich, president, Munsingwear, Inc., Minneapolis, Minn., and district representative, Training Within Industry Branch, War Manpower Commission; Lewis E. Pierson, chairman, Greater New York War Savings Staff, Treasury Department and past president of the National Chamber; L. B. F. Raycroft, manager, Public and Industrial Relations, The Electric Storage Battery Company, Philadelphia, Pa.; Carleton B. Tibbets, president, Los Angeles Steel Casting Company, and president of the Los Angeles Chamber of Commerce; Ralph C. Welch, employment manager, Camera Works, Eastman Kodak Company, Rochester, N. Y.; Allen Whitfield, Whitfield and Musgrave, Des Moines, Iowa; Frank K. Winans, president, The Excess Insurance Company of America, New York City; and T. Guy Woolford, chairman of the board, Retail Credit Company, Atlanta, Ga.

EDUCATIONAL EVENTS

Calendar

October

- 1-3 Civil Service Assembly. The Annual Conference of the Institute of Traffic Engineers, St. Paul, Minnesota.
- 2-3 Sixth Annual Clinic on Education, Winfield, Kansas. For information write EVAN E. EVANS, Superintendent of Schools, Winfield, Kansas.
- 4-10 National Fire Prevention Week.
- 5-8 The Annual Meeting of the National Tax Association, Cincinnati, Ohio.

November

- 8-14 American Education Week with theme, **Education for Free Men**. Manuals for each of the four levels of education, kindergarten through senior high school are twenty-five cents each. Packets for each level containing posters, leaflets, stickers, and other materials, as well as the manual for that particular level cost fifty cents. Send orders to the National Education Association, 1201 Sixteenth Street, N. W., Washington, D. C.
- 10 The Annual Meeting of the Academy of Political Science, New York City.
- 11-13 The Sixth Annual Meeting of the School Broadcast Conference, Chicago. Headquarters, Morrison Hotel.
- 15-21 National Book Week with theme, **Forward with Books**. Information can be secured by writing Albert R. Crone, Director, 62 West 45th Street, New York City.
- 26-28 The Twenty-second Annual Meeting of the National Council for the Social Studies, New York City. Headquarters, Hotel Pennsylvania. Information can be secured from the Council, 1201 Sixteenth Street, N. W., Washington, D. C.
- 27-28 The Annual Convention of the Middle States Association of Colleges and Secondary Schools, New York City. Information can be secured from Karl Miller, University of Pennsylvania, Philadelphia, Pennsylvania.

December

- 2-5 The Annual Convention of the American Vocational Association, Toledo, Ohio.
- 15 Bill of Rights Day.
- 28-30 The Annual Meeting of the American Sociological Society, Cleveland, Ohio.
- 28-30 The Annual Conference of the American Political Science Association, Chicago.
- 28-31 The Midwinter Conference of the American Library Association, Chicago.

February

- 26-Mar. 1
The Twenty-seventh Annual Winter Convention of the National Association of Secondary-School Principals, St. Louis, Missouri. Headquarters, Hotel Jefferson.
- 26-Mar. 2
The Seventy-third Annual Convention of the American Association of School Administrators, St. Louis, Missouri.

March

- 4-6 The Annual Meeting of the American Association of Junior Colleges, St. Louis, Missouri. Headquarters, Hotel Statler.

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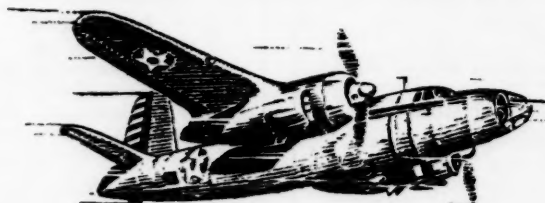
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